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     ANSWER 1 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
     2002:166945 BIOSIS
AN
     PREV200200166945
DN
ΤI
     Use of IL-12 and IL-12
     antagonists in the treatment of autoimmune diseases.
AU.
     Leonard, John (1); Goldman, Samuel; O'Hara, Richard, Jr.
     (1) Auburn, NH USA
CS
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ASSIGNEE: Genetics Institute, Inc.

PI US 6338848 January 15, 2002

SO Official Gazette of the United States Patent and Trademark Office Patents, (Jan. 15, 2002) Vol. 1254, No. 3, pp. No Pagination. http://www.uspto.gov/web/menu/patdata.html. e-file. ISSN: 0098-1133.

DT Patent

LA English

AB Method of treating autoimmune conditions are disclosed comprising administering to a mammalian subject IL-12 or an IL-12 antagonist. In certain preferred embodiments the autoimmune condition is one which is promoted by an increase in levels of IFN-gamma or TNF-alpha. Suitable conditions for treatment include multiple sclerosis, systemic lupus erythematosus.

increase in levels of IFN-gamma or TNF-alpha. Suitable conditions for treatment include multiple sclerosis, systemic lupus erythematosus, rheumatoid arthritis, autoimmune pulmonary inflammation, Guillain-Barre syndrome, autoimmune thyroiditis, insulin dependent diabetes melitis and autoimmune inflammatory eye disease.

L9 ANSWER 2 OF 20 WPIDS (C) 2002 THOMSON DERWENT

AN 2002-147853 [19] WPIDS

DNC C2002-045892

TI Composition for modulating immune response, comprises a spore system having a spore and polypeptide, carbohydrate or nucleotide sequence having anti-pathogenic activity.

DC B04 D16

IN GOLDMAN, S; LATHROP, S J; LONGCHAMP, P F; WHALEN, R G

PA (MAXY-N) MAXYGEN INC

CYC 96

PI WO 2002000232 A2 20020103 (200219) * EN 137p

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2001073009 A 20020108 (200235)

ADT WO 2002000232 A2 WO 2001-US20372 20010626; AU 2001073009 A AU 2001-73009 20010626

FDT AU 2001073009 A Based on WO 200200232

PRAI US 2000-214161P 20000626

AB WO 200200232 A UPAB: 20020321

NOVELTY - A composition (I), comprising a spore system (II) having a spore and a peptide, polypeptide, protein, carbohydrate or nucleotide sequence having anti-pathogenic activity displayed on, bound to or contained within, the spore, is new.

 ${\tt DETAILED}$ <code>DESCRIPTION</code> - <code>INDEPENDENT</code> <code>CLAIMS</code> are also included for the following:

- (1) releasing a spore system of interest, comprising:
- (a) transforming a cell capable of sporulation with an exogenous nucleic acid;
- (b) inducing sporulation of the cell, where at least one spore system is produced; and $\ensuremath{\mathsf{S}}$
 - (c) lysing the cell to release the spore system;
- (2) displaying a polypeptide at one or more sites of interest on a surface of a spore, comprising:
- (a) transforming a cell capable of sporulation with a recombinant nucleic acid vector, comprising a nucleic acid encoding a polypeptide fused in frame to a nucleic acid encoding a spore protein; and
- (b) expressing a fusion protein comprising the polypeptide and the spore coat protein so that the fusion protein is attached to the spore coat of the spore at one or more site of interest on the spore surface;
 - (3) a detection system (DS) comprising (II) which comprises a moiety

that provides a detectable signal and a polypeptide capable of capturing a detectable compound;

- (4) delivery of a polypeptide of interest, comprising:
- (a) transforming a cell that is capable of sporulating with a nucleic acid encoding the polypeptide;
 - (b) inducing sporulation of the cell to form a spore; and
 - (c) delivering the spore to a site of interest;
 - (5) modulation of an adjuvant effect in an organism, comprising:
 - (a) generating a non-viable spore, having an adjuvant effect;
 - (b) isolating the spore; and
- (c) contacting the organism with the spore and a nucleic acid, polypeptide, or peptide; and
- (6) enhancing (M1) an immune response to an immunogenic polypeptide or peptide in a subject, comprising administering (I).

ACTIVITY - Antibacterial; virucide; anti-HIV (human immunodeficiency virus); cytostatic; neuroprotective; nootropic; hepatotropic; antipyretic; antiinflammatory; antirheumatic; antiarthritic; antidiabetic; immunosuppressive; antipsoriatic; antiallergic; antiasthmatic.

MECHANISM OF ACTION - Modulator of immune response (claimed); vaccine.

Spores from Bacillus subtilis were tested to determine if the spores had an adjuvant effect. The specific immunological response of mice to spores and V-antigen mixed together was compared to the specific immunological response of mice to the V-antigen protein alone. 1 micro g, 0.5 micro g or 0.25 micro g of purified recombinant V-antigen was mixed with 5 multiply 108 non-recombinant B. subtilis spores or used alone. The three V-antigen protein/spore mixtures and three amounts of V-antigen protein were injected intraperitoneally into separate groups of mice, at days 1, 21 and 35. Mice were bled on days 10, 21 and 45. Serum was analyzed for specific and V-antigen immunoglobulins by an indirect enzyme linked immunosorbent assay (ELISA) using standard procedures. The presence of spores in the inoculum increased the antibody titer between 10-fold and 1000-fold, depending on the amount of protein inoculated. The data suggested that spores act to augment a specific immune response to immunogenic polypeptide, such as V-antigen protein.

USE - (I) is useful for modulating (producing or enhancing) an immune response of an organism, and for generating a desired product. DS is useful for detecting a compound. (All claimed). The spores are useful in production, packaging, delivering and presentation systems for industrial biocatalyst and in medical applications including immunization and vaccination. The spores are also useful as therapeutics and/or prophylactic agents, and as vaccines against a broad spectrum of immunogens and bacterial, viral and parasitic pathogens and toxins. The spores are also useful for production and immobilization of enzymes and proteins for industrial use, and in a variety of biotechnology settings as carriers for nucleic acids and biotin linked ligands. (II) is useful as sensor and detector. (II) is useful as a vaccine or immunomodulatory agent against a disease or disease causing pathogen including Staphylococcus sp., Streptococcus sp., viral encephalitis, human immunodeficiency virus (HIV), cytomegalovirus, poliomyelitus, rabies, cancer, typhoid, parasites, anthrax, foot and mouth disease, Alzheimer's disease, hepatitis, diphtheria, pertussis, hemorrhagic fevers, influenza, cholera, meningitis, measles, mumps, Lyme disease, tetanus, yellow fever and pneumonia. (I) is also useful for treating allergy, asthma, autoimmune diseases, e.g. rheumatoid arthritis, diabetes mellitus and multiple sclerosis, septic shock, organ transplantation and inflammatory conditions including inflammatory bowel syndrome, psoriasis, pancreatitis, and other immunodeficiencies.

Dwg.0/12

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- AN 2002:291341 BIOSIS
- DN PREV200200291341
- TI Expression and regulation of the PD-L1 immunoinhibitory molecule on microvascular endothelial cells.
- AU Eppihimer, Michael J. (1); Gunn, Jason; Freeman, Gordon J.; Greenfield, Edward A.; Chernova, Tetyana; Erickson, Jamie; Leonard, John P.
- CS (1) Discovery Research: Respiratory Diseases, Wyeth/Genetics Institute, Inc., One Burtt Road, Andover, MA, 01810: meppihimer@genetics.com USA
- SO Microcirculation (New York), (April, 2002) Vol. 9, No. 2, pp. 133-145. http://www.naturesj.com/mn/index.html. print. ISSN: 1073-9688.
- DT Article
- LA English
- AB Objective: To evaluate the expression and regulation of a novel B7-like protein, PD-L1, the ligand for the immunoinhibitory receptor PD-1 expressed on activated T-cells, on microvascular endothelial cells (ECs). Methods: PD-L1 expression on ECs in vitro and in vivo was quantified by using a dual radiolabeled antibody technique after treatment with interferons (IFN) and IL-12, respectively. Changes in the level of PD-L1 mRNA were determined by using RT-PCR. Results: PD-L1 was observed to be present on ECs under basal conditions. Treatment of ECs with IFN-alpha, -beta and -gamma, but not LPS, was observed to induce elevations in the mRNA and surface expression of PD-L1 on ECs. By using a dual radiolabeled monoclonal antibody (mAb) technique, PD-L1 expression in various tissues of control and IL -12 challenged wild-type and IFN-gamma-deficient mice was measured. A significant increase in PD-L1 expression was observed in tissues at 24 hours after IL-12-challenge, with peak levels of PD-L1 occurring 72 hours after IL-12 challenge. IL-12 was not effective at inducing PD-L1 expression in tissues of IFN-gamma-deficient mice. Conclusions: These data show the expression of a novel B7-like molecule on murine ECs that is mediated by IFN-alpha, -beta, and -gamma, and suggest a potential pathway by which ECs may modulate T-cell function.
- L9 ANSWER 4 OF 20 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
- AN 2001274332 EMBASE
- TI Interleukin-12 gene therapy vaccines: Directing the immune system against minimal residual leukemia.
- AU Dunussi-Joannopoulos K.; Leonard J.P.
- CS Dr. K. Dunussi-Joannopoulos, Genetics Institute, One Burtt Road, Andover, MA 01810, United States
- SO Leukemia and Lymphoma, (2001) 41/5-6 (483-492). Refs: 60
 - ISSN: 1042-8194 CODEN: LELYEA
- CY United Kingdom
- DT Journal; General Review
- FS 016 Cancer
 - 022 Human Genetics
 - 025 Hematology
 - 026 Immunology, Serology and Transplantation
 - 030 Pharmacology
 - 037 Drug Literature Index
- LA English
- SL English
- AB Current overall survival rates for patients with AML remain poor and there is need for novel therapeutic approaches. One such approach is to use the patient's own immune system to eliminate minimal residual disease. Recent advances in genetic manipulation of tumor cells, together with a better understanding of the immune mechanisms controlling the host-tumor relationship have led to a flurry of preclinical and clinical studies on tumor cell vaccines. Here we present a brief overview of genetic

manipulation of tumor cells, and highlight important principles of cancer immunity and cancer vaccines. Special emphasis is given on recent work on the role of interleukin-12 (IL-12) based vaccines in murine AML. These studies have shown that vaccines with AML cells, genetically modified to secrete IL-12, are potent stimulators of the immune system and lead to the development of both prophylactic and therapeutic anti-leukemia immunity.

L9 ANSWER 5 OF 20 WPIDS (C) 2002 THOMSON DERWENT DUPLICATE 3 AN 2000-524532 [47] WPIDS DNN N2000-387705 DNC C2000-155840 TI Humanized immunoglobulin having a binding specificity to B7-1 (derived from ATCC PTA-263), or B7-2 (derived from ATCC CRL-12524) molecules, modulates immune responses and can therefore treat e.g. autoimmune diseases, infectious diseases. DC B04 D16 S03 IN CARRENO, B; CELNIKER, A C; CO, M S; COLLINS, M; FRIEDRICH, S; GOLDMAN, S; GRAY, G S; KNIGHT, A; OHARA, D; RUP, B; VASQUEZ, M; VELDMAN, G M; WARNER, G; GARVIN, W; GRAY, C S; STUART, F; O'HARA, D PΑ (GEMY) GENETICS INST INC CYC 91 PΤ WO 2000047625 A2 20000817 (200047)* EN 158p RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW AU 2000039988 A 20000829 (200062) NO 2001003911 A 20011010 (200174) EP 1159300 A2 20011205 (200203) R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI CZ 2001002925 A3 20020116 (200215) BR 2000008209 A 20020219 (200222) ADT WO 2000047625 A2 WO 2000-US3303 20000209; AU 2000039988 A AU 2000-39988 20000209; NO 2001003911 A WO 2000-US3303 20000209, NO 2001-3911 20010810; EP 1159300 A2 EP 2000-919275 20000209, WO 2000-US3303 20000209; CZ 2001002925 A3 WO 2000-US3303 20000209, CZ 2001-2925 20000209; BR 2000008209 A BR 2000-8209 20000209, WO 2000-US3303 20000209 AU 2000039988 A Based on WO 200047625; EP 1159300 A2 Based on WO 200047625; CZ 2001002925 A3 Based on WO 200047625; BR 2000008209 A Based on WO 200047625 PRAI US 1999-339596 19990624; US 1999-249011 19990212 WO 200047625 A UPAB: 20000925 NOVELTY - Humanized immunoglobulin having a binding specificity to B7-1 (derived from ATCC PTA-263), or B7-2 (derived from ATCC CRL-12524) molecules, comprising an antigen binding region of non-human origin and a portion of a human immunoglobulin, is new. DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following: (1) a host cell comprising nucleic acid that encodes a humanized B7-1 antibody and/or a humanized B7-2 antibody; (2) a humanized immunoglobulin light/heavy chain having binding specificity for B7-1 comprising CDR1, CDR2, and CDR3 of the light/heavy chain of murine 1F1 antibody and a human light/heavy chain

specification);
(4) an isolated nucleic acid (N2) comprising a defined 405 base pair

(3) an isolated nucleic acid (N1) comprising a defined 390 base pair

(bp) sequence, encoding a defined 130 amino acid human immunoglobulin

light chain variable region (P1) of B7-1 (both given in the

framework region;

- (bp) sequence, encoding a defined 135 amino acid human immunoglobulin heavy chain variable region (P2) of B7-1 (both given in the specification);
- (5) an isolated nucleic acid (N3) comprising a defined 396 base pair (bp) sequence, encoding a defined 132 amino acid human immunoglobulin light chain variable region (P3) of B7-2 (both given in the specification);
- (6) an isolated nucleic acid (N4) comprising a defined 405 base pair (bp) sequence, encoding a defined 135 amino acid human immunoglobulin heavy chain variable region (P4) of B7-2 (both given in the specification);
- (7) a fused gene encoding humanized immunoglobulin light or heavy chain comprising a first nucleic acid sequence encoding an antigen binding region derived from murine 1F1 or 3D1 monoclonal antibody and a second nucleic acid sequence encoding a portion of a constant region of an immunoglobulin of human origin;
- (8) a method for inhibiting the interaction of a first cell bearing a B7-1 receptor with a second cell bearing B7-1, comprising contacting the first cell with a humanized immunoglobulin having a binding specificity to B7-1, or B7-2 molecules;
- (9) a method for treating an individual having a transplanted organ, tissue or cell comprising administering humanized immunoglobulin having a binding specificity to B7-1, or B7-2 molecules;
 - (10) a method for treating a disease modulated by B7-1 or B7-2;
- (11) a method for making a humanized immunoglobulin having binding specificity for B7-1 or B7-2 comprising:
- (a) determining the complementarity determining regions (CDRs) of an **antibody** of non-human origin which has binding specificity for B7-1 or B7-2;
- (b) obtaining a human **antibody** having a framework region amino acid sequence suitable for grafting of the CDRs in (a); and
 - (c) grafting the CDRs of (a) with those of (b);
- (12) a method for determining the presence or absence of B7-1 or B7-2 in a sample comprising:
- (a) contacting the sample with an antibody specific to B7-1 or B7-2 to allow complex formation; and
 - (b) detecting the presence or absence of the complex;
- (13) a humanized immunoglobulin light or heavy chain having binding specificity for B7-2 comprising CDR1, CDR2, and CDR3 of the light chain of murine 3D1 antibody, and a human light or heavy chain framework region;
 - (14) a method for transplanting cells into an individual comprising:
 - (a) obtaining cells from a donor;
- (b) contacting the cells with an immunoglobulin specific to B7-1 and B7-2 and recipient cells from the individual to allow tolerance reduction; and $\frac{1}{2}$
 - (c) introducing the mixture to the individual;
- (15) a method for treating a disorder selected from autoimmune diseases, infectious diseases, inflammatory disorders, systemic lupus erythematosus, diabetes mellitus, insulitis, asthma, arthritis, inflammatory bowel disease, inflammatory dermatitis, and multiple sclerosis comprising administering a humanized immunoglobulin to B7-1 and B7-2
- (16) a method for treating a transplant recipient or preventing transplant rejection in a transplant recipient, comprising administering an immunoglobulin specific to B7-1 and B7-2; and
- (17) a method for decreasing an **antibody** response to an antigen in a mammal comprising administering a humanized immunoglobulin specific to B7-1 or B7-2.

ACTIVITY - Immunosuppressive; antiinfective; antiinflammatory; dermatological; antidiabetic; antiasthmatic; antiarthritic; cytostatic; antianemic; neuroprotective.

MECHANISM OF ACTION - Modulation of immune responses; inhibition of T cell costimulation.

Isolated CD28+ T cells were washed once and resuspended in RPMI (not defined) complete medium, supplemented with 2 ng/ml PMA (not defined), to a cell density of 5 multiply 105 cells/ml. The CD28+ T cells were added to the antibody/CHO/hB7-2 mixture, incubated for 3 days at 37 deg. C, 5% CO2, and T cell proliferation was measured by pulsing for the last 6 hours of culture with 1 uCi of (3H)-thymidine. The cells were harvested on a filter and the incorporated radioactivity was measured in a scintillation counter. Results showed that both antibodies exhibited dose dependent inhibition of B7-2 driven T cell proliferation with similar IC50 (inhibitory concentration 50%) values of 72 pm (murine anti-hB7-2) and 50 pm (humanized anti-hB7-2) indicating that both antibodies were similar and very effective in inhibiting the B7-2 T cell stimulatory signal. This demonstrated that the high affinity anti-B7-2 mAbs could block B7-2 functionality by inhibiting the activation and/or proliferation of human T cells.

USE - The humanized immunoglobulin with binding specificity to B7-1 and/or B7-2 is useful for treating autoimmune diseases, infectious diseases, inflammatory disorders, systemic lupus erythematosus, diabetes mellitus, insulitis, asthma, arthritis, inflammatory bowel disease, inflammatory dermatitis, and multiple sclerosis. The immunoglobulins are also useful for treating a transplant recipient or preventing transplant rejection in a transplant recipient, and treating proliferative disease (leukemia, lymphoma and cancer), anemia (sickle-cell anemia, thalassemia and aplastic anemia), inborn errors of metabolism, congenital immunodeficiency diseases, and myeloid dysplasia syndrome. Dwg.0/28

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L9 ANSWER 6 OF 20 WPIDS (C) 2002 THOMSON DERWENT DUPLICATE 4
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AN 2000-430395 [37] WPIDS

CR 1997-132638 [12]; 1997-165283 [15]; 2000-282570 [23]

DNC C2000-130765

TI New polynucleotides encoding human cytotoxic T-lymphocyte antigen (CTLA)-8 proteins useful for treating e.g. autoimmune diseases, inflammatory diseases, and microbial infections.

DC B04 D16

IN CARLIN, M; GIANNOTTI, J; GOLDEN-FLEET, M M; GOLDMAN, S; JACOBS, K; KELLEHER, K; MI, S; NEBEN, S; PITTMAN, D

PA (GEMY) GENETICS INST INC

CYC :

PI US 6074849 A 20000613 (200037)* 25p

ADT US 6074849 A Provisional US 1995-35347P 19950719, CIP of US 1995-514014 19950811, US 1996-685239 19960718

PRAI US 1995-35347P 19950719; US 1995-514014 19950811; US 1996-685239 19960718

AB US 6074849 A UPAB: 20010711

NOVELTY - An isolated polynucleotide (I) comprising nucleotides 146-544 of an 813 base pair sequence, fully defined in the specification, or its variant resulting from degeneracy of the genetic code, is new.

 ${\tt DETAILED}$ <code>DESCRIPTION</code> - <code>INDEPENDENT</code> <code>CLAIMS</code> are also included for the following:

- (1) a host cell transformed with (I) operably linked to an expression control sequence; and
- (2) producing a human cytotoxic T-lymphocyte antigen (CTLA)-8 protein comprising culturing a host cell of (1), and purifying the human CTLA-8 protein from the culture.

ACTIVITY - Immunosuppressive; neuroprotective; dermatological; antirheumatic; antiarthritic; antithyroid; antidiabetic; ophthalmological; anti-HIV; antibacterial; hepatotropic; anti-inflammatory; virucide; antifungal; protozoacide; antiallergic; antianemic; cytostatic.

MECHANISM OF ACTION - Gene therapy; Interferon production inducer;

Interleukin (IL)-3 inducer; granulocyte-monocyte colony stimulating factor inducer; chemotaxis-stimulator. MRC5 cells were incubated in the presence of human CTLA-8 (B18), and production of IL-6 and IL-8 were measured. Herpes CTLA-8 (IL-7) was used as positive control. B18 showed titerable production of both IL-6 and IL-8.

USE - (I) is useful for treating autoimmune disorders (e.g. multiple sclerosis, systemic lupus erythematosus, rheumatoid arthritis, autoimmune thyroiditis, insulin dependent diabetes mellitus, myasthenia gravis, and autoimmune inflammatory eye disease), viral (e.g. human immunodeficiency virus (HIV), hepatitis, herpes, influenza, cytomegalovirus (CMV)), bacterial, fungal (e.g. Candida) or protozoan (e.g. malaria, leshmaniasis) infections. (I) can also be used for treating allergic reactions, and to suppress chronic or acute inflammation associated with infection such as septic shock or systemic inflammatory response syndrome, inflammatory bowel disease, Crohn's disease or resulting from over production cytokines, regulation of hematopoiesis and consequently in the treatment of myeloid or lymphoid cell deficiencies, supports the growth and proliferation of erythroid progenitor cells alone or in combination with other cytokines. (I) can be used in treating anemia, in chemotherapy to treat or prevent consequent myeloid suppression, in treating various stem cell disorders (e.g. aplastic anemia and paroxysmal nocturnal hemoglobinuria), and in repopulating the stem cell compartment post irradiation/chemotherapy, either in vivo or ex vivo as normal cells or genetically manipulated for gene therapy. Human CTLA-8 proteins may be used to inhibit growth and proliferation of vascular endothelial cells, hence effective in inhibiting angiogenesis as well as in treating tumors, as well as to immunize animals to obtain antibodies which specifically react with the CTLA-8 protein, and which may inhibit CTLA-8 binding to its receptor. Dwg.0/10

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L9
     ANSWER 7 OF 20 WPIDS (C) 2002 THOMSON DERWENT
                                                       DUPLICATE 5
AN
     2000-282570 [24]
                        WPIDS
CR
     1997-132638 [12]; 1997-165283 [15]; 2000-430395 [36]
DNC C2000-085202
     Novel human CTLA-8 protein useful for treating immunodeficiencies and
     disorders, in regulating growth, proliferation and/or activity of T and/or
     B lymphocytes and multiple sclerosis, rheumatoid arthritis.
DC
     CARLIN, M; GIANNOTTI, J; GOLDEN-FLEET, M M; GOLDMAN, S; JACOBS,
TN
     K; KELLEHER, K; MI, S; NEBEN, S; PITTMAN, D
     (GEMY) GENETICS INST INC
PA
CYC
    1
     US 6043344
                   A 20000328 (200024)*
PΙ
                                              25p
ADT
    US 6043344 A Provisional US 1995-35347P 19950719, CIP of US 1995-504032
     19950719, CIP of US 1995-514014 19950811, Div ex US 1996-685239 19960718,
     US 1998-34810 19980304
FDT US 6043344 A CIP of US 5707829
PRAI US 1995-35347P
                      19950719; US 1995-504032
                                                 19950719; US 1995-514014
     19950811; US 1996-685239
                                19960718; US 1998-34810
                                                           19980304
          6043344 A UPAB: 20010711
AB
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NOVELTY - An isolated human CTLA-8 (B18) (I) with a fully defined sequence as given in the specification, is new.

DETAILED DESCRIPTION - (I) comprises a fully defined sequence of 163 (2) amino acids, amino acids 11-, 29- or 31-163 of (2), the fragment of (2) comprising amino acids 11-, 29- or 31-163 of (2), as given in the specification.

An INDEPENDENT CLAIM is also included for the preparation of (I). ACTIVITY - Immunosuppressive; antiarthritic; antiinflammatory; immunostimulant; antidiabetic; neuroprotective; dermatological; antianemic; antiallergic; antithyroid; antiasthmatic; antibacterial; cytostatic.

MECHANISM OF ACTION - Angiogenesis inhibitor; hematopoiesis regulator; growth or proliferation of vascular endothelial cells inhibitor; tumor growth inhibitor; myeloid, lymphoid cells or their progenitors proliferator; IFN- gamma, IL-3, GM-CSF production inducer; gene therapy. The ability of (I) to inhibit angiogenesis was examined in an angiostatic activity assay. Primary human umbilical cells (HUVECs) were seeded to 2 multiply 103 cells/well of a 96 well plate and incubated. The cells were then starved in M199 medium. Conditioned media containing B18 was obtained from transfected COS or stably expressing CHO cells and 1:10, 1:50, 1:250 and 1:1250 were prepared in M199-CS medium containing 100 ng/ml FGF. The dilutions of B18 were added to the starved cells and incubated for 72 hr at 37 deg. C. The cells were then radiolabeled and trypsinized for liquid scintillation counting, after washing. Results showed that human CTLA-8 (B18) inhibits angiogenesis.

USE - (I) is used for treating immune deficiencies and disorders (including severe combined immunodeficiency (SCID), e.g. in regulating growth and proliferation of T and/or B lymphocytes, and effecting the cytolytic activity of NK cells and other cell populations. These immune deficiencies may be genetic or caused by viruses, bacterial or fungal infections. The proteins are also used for boosting the immune system for treating cancer and in the treatment of autoimmune diseases such as multiple sclerosis, systemic lupus erythematosus, rheumatoid arthritis, autoimmune pulmonary inflammation, Guillain-Barre syndrome, autoimmune thyroiditis, insulin dependent diabetes mellitis, myasthenia gravis, graft-versus-host disease and autoimmune inflammatory eye disease. They are also used for treating asthma, allergic reactions or other respiratory problems and suppressing chronic or acute inflammation associated with infection such as septic shock or systemic inflammatory response syndrome (SIRS), inflammatory bowel disease and Crohn's disease. (I) is also used for regulating hematopoiesis and consequently in the treatment of myeloid or lymphoid deficiencies i.e. by supporting the growth and proliferation of erythroid progenitor cells, myeloid cells, megakaryocytes, hematopoietic stem cells and thus used for treating anemia, thrombocytopenia, aplastic anemia and paroxysmal nocturnal hemoglobinuria. They also inhibit the growth and proliferation of vascular endothelial cells and thus are effective in inhibiting angiogenesis. The polynucleotides encoding (I) can be used in gene therapy. The proteins are used as immunogens to produce polyclonal or monoclonal antibodies useful for performing diagnostic assays for CTLA-8.

DESCRIPTION OF DRAWING(S) - The figure shows the data relating to the ability of CTLA-8 to inhibit angiogenesis.

Dwg.3/7

- L9 ANSWER 8 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
- AN 2001:39565 BIOSIS
- DN PREV200100039565
- TI Myelin oligodendrocyte glycoprotein induced EAE in IL-12 p35 deficient mice.
- AU Hunter, S. E. (1); Thibodeaux, D. K. (1); Bouchard, P. (1); Leonard, J. P. (1)
- CS (1) Genetics Institute, Inc., Cambridge, MA, 02140 USA
- SO FASEB Journal, (April 20, 2000) Vol. 14, No. 6, pp. All16. print.
 Meeting Info.: Joint Annual Meeting of the American Association of
 Immunologists and the Clinical Immunology Society Seattle, Washington, USA
 May 12-16, 2000
 ISSN: 0892-6638.
- DT Conference
- LA English
- SL English
- L9 ANSWER 9 OF 20 MEDLINE
- AN 2000021818 MEDLINE

- TI Immunological reconstitution and correlation of circulating serum inflammatory mediators/cytokines with the incidence of acute graft-versus-host disease during the first 100 days following unrelated umbilical cord blood transplantation.
- AU Abu-Ghosh A.; Goldman S.; Slone V.; Van de Ven C.; Suen Y.; Murphy L.; Sender L.; Cairo M.S.
- CS Dr. M.S. Cairo, Georgetown University Medical Center, Lombardi Cancer Center, 2 East Main, 3800 Reservoir Rd. NW, Washingon DC 20007, United States
- SO Bone Marrow Transplantation, (1999) 24/5 (535-544). Refs: 39

ISSN: 0268-3369 CODEN: BMTRE

- CY United Kingdom
- DT Journal; Article
- FS 005 General Pathology and Pathological Anatomy
 - 016 Cancer
 - 025 Hematology
 - 026 Immunology, Serology and Transplantation
 - 037 Drug Literature Index
- LA English
- SL English
- AΒ We investigated early immunological reconstitution and the production of circulating inflammatory mediators and their relationship to aGVHD in children during the first 100 days following unrelated UCBT. Nine patients had an underlying malignant disease (ALL, ANLL), and two, non-malignant diseases (SAA, ALD). The median age was 10 years (range: 1.25-21). Seven of 11 patients were alive by day 100, two died from regimen-related toxicity, and two died from severe aGVHD (grade .gtoreq. III). Myeloid engraftment (ANC .gtoreq. 500 /mm3 x 2 days) occurred at a median of 24 days (range: 14-55), while platelet engraftment (platelet count .gtoreq. 20,000 /mm3 untransfused x 7 days) was delayed and occurred at a median of 52 days (range: 33-95). The mean cell dose of CD34+ cells was 3.3 .+-. 3.51×105 /kg, and of CD34+/CD41+ cells was 3.94 .+-. 3.99×104 /kg. Acute GVHD (grade II-IV) developed in seven patients (77%), and severe aGVHD (grade III-IV) developed in five patients (55%). Serum levels of IL-2R.alpha.; IL-2, IL-4, IL-7, IL-12, and IFN.gamma. were not significantly different between patients with grades 0-I aGVHD and patients with grades II-IV aGVHD. Evaluation of immunological reconstitution on day 90 post UCBT demonstrated an early recovery of the absolute numbers of B cells (CD19+) and NK cells (CD3-/CD56+). Immunoglobulin levels for IgG, IgM and IgA remained normal throughout the study period. PMN functional studies demonstrated normal superoxide generation, bacterial killing (BK), and chemotaxis (CTX). However, both helper (CD3+/CD4+) and suppressor (CD3+/CD8+)T cell subsets remained low during the first 100 days post UCBT with mean .+-. s.e.m. values of 120 .+-. 29 /mm3 and 10 .+-. 50 /mm3, respectively (normal = 900-2860 /mm3 (CD3/CD4), normal = 630-1910 /mm3 (CD3/CD8)). Mitogen response studies showed low blastogenesis to PHA and PWM, with a mean c.p.m. .+-. s.e.m. value of 1.7 .+-. 0.67 x 104 for PHA (NL .gtoreq. 75 x 103) and 8.42 .+-. 4.1×103 for PWM (NL .gtoreq. 25 x 103). In conclusion, serum levels of inflammatory mediators were not predictive nor did they correlate with the severity of aGVHD. Recovery of NK cells, B cells, and PMN functions occurred within the first 90 days post transplant. However, T cell subsets, CD3+/CD4+ and CD3+/CD8+, and T cell functional activity remained significantly decreased and may account for the high incidence of infectious morbidity seen during this immediate post UCBT period.
- L9 ANSWER 12 OF 20 WPIDS (C) 2002 THOMSON DERWENT DUPLICATE 6
- AN 1997-132638 [12] WPIDS
- CR 1997-165283 [15]; 2000-282570 [23]; 2000-430395 [36]
- DNC C1997-042879
- TI New nucleic acid encoding the CTLA-8 protein modulates growth of

- DN 20021818 PubMed ID: 10553047
- TI Autocrine regulation of IL-12 receptor expression is independent of secondary IFN-gamma secretion and not restricted to T and NK cells.
- AU Thibodeaux D K; Hunter S E; Waldburger K E; Bliss J L; Trepicchio W L; Sypek J P; Dunussi-Joannopoulos K; Goldman S J; Leonard J P
- CS Preclinical Research and Development, Genetics Institute, Andover, MA 01810, USA.
- SO JOURNAL OF IMMUNOLOGY, (1999 Nov 15) 163 (10) 5257-64. Journal code: 2985117R. ISSN: 0022-1767.
- CY United States
- DT Journal; Article; (JOURNAL ARTICLE)
- LA English
- FS Abridged Index Medicus Journals; Priority Journals
- EM 199912
- ED Entered STN: 20000113 Last Updated on STN: 20000113 Entered Medline: 19991202
- AΒ The biological response to IL-12 is mediated through specific binding to a high affinity receptor complex composed of at least two subunits (designated IL-12Rbeta1 and IL-12Rbeta2) that are expressed on NK cells and activated T cells. The selective loss of IL-12Rbeta2 expression during Th2 T cell differentiation suggests that regulation of this receptor component may govern IL-12 responsiveness. In murine assays, down-regulation of IL-12Rbeta2 expression can be prevented by treatment with IFN-gamma, indicating that receptor expression and hence IL-12 responsiveness may be regulated, at least in part, by the local cytokine milieu. In this study, we report that cellular expression of both IL-12Rbeta1 and beta2 mRNA is increased in the lymph nodes of naive mice following systemic administration of murine rIL-12 (rmIL-12). Changes in IL-12R mRNA were associated with increased IFN-gamma secretion following ex vivo activation of lymph node cells with rmIL-12, indicating the presence of a functional receptor complex. Expression of IL-12R mRNA was not restricted to lymph node T cells, and its autocrine regulation was independent of secondary IFN-gamma secretion. Data from fractionated lymph node cells as well as rmIL-12-treated B cell-deficient mice suggest that IL-12 -responsive B cells may represent an alternative cellular source for IFN-gamma production. However, the strength of the biological response to rmIL-12 is not governed solely by receptor expression, as rmIL-12-induced IFN-gamma secretion from cultured lymph node cells is accessory cell dependent and can be partially blocked by inhibition of B7 costimulation.
- L9 ANSWER 10 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
- AN 1999:275655 BIOSIS
- DN PREV199900275655
- TI Prolonged inhibition of murine lupus by short term therapy with anti-B7 and anti-IL-12 antibodies during onset of disease.
- AU Collins, M. (1); Nagle, S. (1); Chung, C. (1); Goldman, S. (1); Sypek, J. (1)
- CS (1) Genetics Institute, Andover, MA, 01810 USA
- SO FASEB Journal, (March 15, 1999) Vol. 13, No. 5 PART 2, pp. A956.
 Meeting Info.: Annual Meeting of the Professional Research Scientists on
 Experimental Biology 99 Washington, D.C., USA April 17-21, 1999 Federation
 of American Societies for Experimental Biology
 . ISSN: 0892-6638.
- DT Conference
- LA English
- L9 ANSWER 11 OF 20 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
- AN 1999315480 EMBASE

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vascular endothelial and haematopoietic cells and induces cytokine
     expression, for treating infection, auto-immune disease, etc..
DC
     B04 D16
     CARLIN, M; JACOBS, K; KELLEHER, K; MCCOY, J M; GIANNOTTI, J; GOLDEN-FLEET,
IN
     M; GOLDMAN, S; MI, S; NEBEN, S; PITTMAN, D; DUCKETT, M C;
     GOLDEN-FLEET, M M; PITMAN, D; CARLIN-DUCKETT, M
     (GEMY) GENETICS INST INC
PΑ
CYC
PΙ
    WO 9704097
                  A2 19970206 (199712) * EN
                                              50p
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        W: AU CA JP MX
     AU 9667123
                  A 19970218 (199723)
    WO 9704097
                  A3 19970912 (199749)
    US 5707829
                 A 19980113 (199809)
                                              30p
     EP 839196
                  A2 19980506 (199822)
                                         EN
        R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
     JP 11510045 W 19990907 (199947)
                                              59p
                  A 19991019 (199950)
    US 5969093
    MX 9800507
                  A1 19980501 (200007)
    MX 9801120
                  A1 19990401 (200055)
    AU 727480
                  B 20001214 (200103)
                  В
    AU 727489
                     20001214 (200103)
    AU 2001028001 A 20010517 (200138)#
    AU 2001028002 A 20010802 (200152)#
    WO 9704097 A2 WO 1996-US11889 19960718; AU 9667123 A AU 1996-67123
     19960218; US 5707829 A US 1995-514014 19950811; EP 839196 A2 EP
     1996-927237 19960718, WO 1996-US11889 19960718; JP 11510045 W WO
     1996-US11889 19960718, JP 1997-506846 19960718; US 5969093 A Div ex US
     1995-514014 19950811, US 1997-833823 19970410; MX 9800507 A1 MX 1998-507
     19980116; MX 9801120 A1 MX 1998-1120 19980210; AU 727480 B AU 1996-67123
     19960718; AU 727489 B AU 1996-67685 19960808; AU 2001028001 A Div ex AU
     1996-67685 19960808, AU 2001-28001 20010314; AU 2001028002 A Div ex AU
     1996-67123 19960718, AU 2001-28002 20010314
FDT AU 9667123 A Based on WO 9704097; EP 839196 A2 Based on WO 9704097; JP
     11510045 W Based on WO 9704097; AU 727480 B Previous Publ. AU 9667123,
     Based on WO 9704097; AU 727489 B Previous Publ. AU 9667685, Based on WO
     9707198; AU 2001028001 A Div ex AU 727489; AU 2001028002 A Div ex AU
     727480
PRAI US 1995-514014
                      19950811; US 1995-504032
                                                 19950719; US 1997-833823
     19970410; WO 1996-US12897 19960808; AU 2001-28001
                                                           20010314; AU
     2001-28002
                   20010314
          9704097 A UPAB: 20011001
AΒ
    WO
    A novel isolated polynucleotide (I) comprises: (a) nucleotides (nt)
     146-544 of an 813 bp sequence given in the specification; (b) a sequence
     able to hybridise with (a) or varying from (a) only within the degeneracy
    of the genetic code; or (c) an allelic variant of (a). Also claimed are:
     (1) host cells transformed with (I); (2) isolated human CTLA-8 protein
    which has 163 amino acids (aa), its 11-163, 29-163 or 31-163 regions or
    any fragments of them with CTLA-8 activity; and (3) antibodies
     (Ab) which specifically react with CTLA-8 protein.
         USE - (I) encodes proteins with CTLA-8 activity. Treatment of mammals
    with CTLA-8 (or non-human analogues or IL-17) results in at least one of:
     (a) inhibition of angiogenesis, growth/proliferation of vascular
    endothelial cells, tumour cells and angiogenesis-dependent tissue growth;
     (b) proliferation of myeloid, erythroid or lymphoid cells (or their
    progeny); or (c) induction of interferon- gamma , IL-3 or GM-CSF produ
     (claimed). Opt. CTLA-8 is expressed in vivo from a suitable vector.
    Typical applications of CTLA-8 are treatment of immune deficiency and
    disorders requiring modulation of T/B cell growth or proliferation, or of
    cytolytic natural killer cells, e.g. viral or microbial infection (e.g.
    HIV, hepatitis, malaria, candidiasis etc.); autoimmune disease (e.g.
    multiple sclerosis, rheumatoid arthritis, insulin-dependent
```

diabetes etc.); to boost the immune response in cancer treatment; as antiinflammatories (e.g. in septic shock or Crohn's disease) and in haematopoietic disorders where growth/proliferation of erythroid, myeloid or megakaryocytic cells is needed. Ab can be used to determine CTLA-8, possibly also for treating some tumours or some of the above conditions. Dwg.0/7

- L9 ANSWER 13 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 7
- AN 1998:80243 BIOSIS
- DN PREV199800080243
- TI Immunoregulation by interleukin-12 in MB49.1 tumor bearing mice: Cellular and cytokine-mediated effector mechanisms.
- AU Hunter, Sharon E.; Waldburger, Kristine E.; Thibodeaux, Deborah K.; Schaub, Robert G.; Goldman, Samuel J.; Leonard, John P. (1)
- CS (1) Genet. Inst., One Burtt Rd., Andover, MA 01810 USA
- SO European Journal of Immunology, (Dec., 1997) Vol. 27, No. 12, pp. 3438-3446.
 ISSN: 0014-2980.
- DT Article
- LA English
- AΒ Administration of recombinant murine interleukin (rmIL)-12 to MB49.1 tumor-bearing mice results in dose-dependent regression of the primary tumor and the generation of protective antitumor immunity in the majority of animals. rmIL-12 administration is associated with a marked increase in lymph node cellularity that is predominantly due to the expansion of B220+ B cells as well as CD8+ T cells. Stimulation of lymph node cells from rmIL-12-treated, but not control tumor-bearing mice, with MB49.1 tumor cells in vitro was shown to enhance the secretion of interferon (IFN)-gamma. The magnitude of this in vitro response was dependent on the dose of rmIL-1 2 administered in vivo and mirrored the change in circulating serum IFN-gamma. Furthermore, at the height of the in vitro response to tumor stimulation, the addition of a neutralizing antibody to murine IL-12 suppressed IFN-gamma production, indicating a role for endogenous IL-12 in this antigen-specific cytokine response. Although studies in SCID mice confirmed that an appropriate T cell response was required for rmIL-12-mediated antitumor activity, in immunocompetent animals early tumor regression was not accompanied by cellular infiltration of the tumor. In contrast, a profound increase in tumor-associated inducible nitric oxide synthase (iNOS) was observed in mice receiving rmIL-12 which preceded T cell infiltration of the tumor which could be detected during the second week of IL-12 treatment. Direct tumor killing through the cytotoxic actions of NO via the iNOS pathway may serve as a way of generating tumor antigen which enables the host to mount a subsequent T cell response against the tumor.
- L9 ANSWER 14 OF 20 MEDLINE

DUPLICATE 8

- AN 1998080712 MEDLINE
- DN 98080712 PubMed ID: 9419442
- TI Regulation of the inflammatory response in animal models of multiple sclerosis by interleukin-12.
- AU Leonard J P; Waldburger K E; Schaub R G; Smith T; Hewson A K; Cuzner M L; Goldman S J
- CS Genetics Institute, Andover, MA 01810, USA.
- SO CRITICAL REVIEWS IN IMMUNOLOGY, (1997) 17 (5-6) 545-53. Ref: 54 Journal code: 8914819. ISSN: 1040-8401.
- CY United States
- DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)

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LA English
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FS Priority Journals

EM 199802

ED Entered STN: 19980306

Last Updated on STN: 20000303 Entered Medline: 19980225

AΒ Interleukin 12 (IL-12), a novel heterodimeric protein produced primarily by antigen-presenting cells, serves as a key regulator of innate and adaptive immune responses. In addition to being a potent inducer of IFN-gamma, IL-12 is widely considered to be the principal cytokine that regulates the generation of Th1 type effector cells. As the successful induction of experimental autoimmune encephalomyelitis (EAE) is associated with a strong Th1 type cellular response, we have evaluated the role of IL-12 in regulating the pathogenesis of EAE in SJL/J mice and Lewis rats. In both settings, treatment with IL-12 was found to accelerate the onset and increase the severity and duration of clinical disease. More importantly, administration of IL-12 to Lewis rats that had recovered from primary disease was found to trigger clinical relapse. In all instances, IL-12-induced exacerbation was associated with a profound increase in iNOS positive macrophages within the perivascular lesions. Although IL-12 -induced IFN-gamma does not appear to be required for exacerbation of disease, neutralizing antibodies against murine IL-12 delay the onset and reduce the severity of adoptively transferred EAE, indicating a role for endogenous IL-12 as regulator of disease. Based on the above findings, effective inhibition of IL-12 in vivo may have great therapeutic value in the treatment of MS and other Th1-associated inflammatory disorders.

L9 ANSWER 15 OF 20 MEDLINE

DUPLICATE 9

AN 97118050 MEDLINE

DN 97118050 PubMed ID: 8958933

- TI Regulation of experimental autoimmune encephalomyelitis by interleukin-12.
- AU Leonard J P; Waldburger K E; Goldman S J
- CS Genetics Institute, Andover, Massachusetts 01810, USA.
- SO ANNALS OF THE NEW YORK ACADEMY OF SCIENCES, (1996 Oct 31) 795 216-26. Journal code: 7506858. ISSN: 0077-8923.
- CY United States
- DT Journal; Article; (JOURNAL ARTICLE)
- LA English
- FS Priority Journals; AIDS
- EM 199701

Last Updated on STN: 20000303

Entered Medline: 19970108

We have evaluated the effects of rmIL-12 on the course of adoptively AΒ transferred EAE. When mice were injected with LNC that had been stimulated in vitro with PLP in the presence of rmIL-12, the subsequent course of disease was more severe and prolonged than controls. In vitro stimulation with PLP in the presence of IL-12 was associated with an increase in IFN-gamma and decrease in IL-4-producing cells, indicating a preferential expansion of Th1 effector cells. At peak disease, no notable differences in either the cellular composition or cytokine expression within CNS lesions was seen between groups. However, the frequency of macrophages that stained positively for inducible nitric oxide synthase (iNOS) was increased in animals challenged with rmIL-12 treated LNC. These data suggest that in addition to promoting the preferential expansion of IFN-gamma-producing cells by rmIL-12 treatment in vitro, in vivo effects leading to macrophage activation and iNOS expression may contribute to the severe, protracted course of CNS inflammation in this model. In contrast, treatment of mice with an

antibody to murine IL-12 following cell transfer completely prevented paralysis with only 40% of the mice developing mild disease. These data suggest that endogenous IL-12 plays a pivotal role in the pathogenesis of this model of autoimmune disease.

- L9 ANSWER 16 OF 20 CAPLUS COPYRIGHT 2002 ACS
- AN 1997:285388 CAPLUS
- DN 126:329093
- TI Effects of interleukin 12 on hematopoietic stem and progenitor cells
- AU Neben, Steven; Leonard, John; Goldman, Samuel; Ploemacher, Rob E.
- CS Department of Immunology and Hematopoiesis, Genetics Institute, Inc., Cambridge, MA, USA
- SO Bone Marrow Transplantation: Basic and Clinical Studies, [Papers presented at the International Symposium on BMT--Basic and Clinical Studies], Tokyo, Oct. 9-10, 1995 (1996), Meeting Date 1995, 28-35. Editor(s): Ikehara, Susumu; Takaku, Fumimaro; Good, Robert A. Publisher: Springer, Tokyo, Japan.
- CODEN: 64HVAW
- DT Conference; General Review
- LA English
- AB A review with 34 refs. Interleukin-12 (IL-12) has been shown to possess potent immunomodulatory activity. It has a unique structure among cytokines, consisting of two covalently linked subunits, one with homol. to other members of the cytokine superfamily, the other being highly homologous to gp130, the signaling subunit of a no. of cytokine receptors. Here we summarize studies showing that IL-12 is a hematopoietic growth factor with potent activity on hematopoietic stem and progenitor cells. In clonal and liq. culture assays, IL-12 synergizes with IL-3 and Steel Factor to increase the no. of colonies as well as to expand both stem and progenitor cell content in the cultures. In stroma-dependent long-term bone marrow cultures, IL-12 addn. causes a decrease in cell prodn. in the first week after inoculation of whole bone marrow cells, followed by an increase in both mature cells and progenitor cells over the next 3 wk. The initial decrease appears to be mediated by IL-12-induced prodn. of IFN-.gamma., possibly by natural killer cells and/or T cells which do not persist in these cultures. Studies in naive mice demonstrate a similar acute decrease in peripheral leukocyte count, mediated by IFN-.gamma., upon administration of IL-12. In contrast, despite a significant decrease in peripheral platelet count, reticulated platelets become elevated and mean megakaryocyte ploidy in the bone marrow shifts from 16N to 32N during IL-12 treatment. These IL-12-mediated effects on megakaryopoiesis are abrogated by simultaneous treatment of mice with antibodies against IFN-.gamma.. These studies provide further information on the potential physiol. role and applications of IL -12 outside the immune system.
- L9 ANSWER 17 OF 20 WPIDS (C) 2002 THOMSON DERWENT DUPLICATE 10
- AN 1995-336810 [43] WPIDS
- DNC C1995-148498
- TI Use of interleukin-I2 or an Il-I2 antagonist for treating autoimmune conditions, eg. multiple sclerosis, lupus, rheumatoid arthritis or diabetes.
- DC B04
- IN GOLDMAN, S; LEONARD, J P; OHARA, R; LEONARD, J; O'HARA, R
- PA (GEMY) GENETICS INST INC
- CYC 24
- PI WO 9524918 A1 19950921 (199543) * EN 37p

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RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
        W: AU CA JP
    AU 9519749
                  A 19951003 (199602)
                  A 19951227 (199605)
     ZA 9500960
                                              33p
     EP 750509
                  A1 19970102 (199706)
                                        EN
        R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
     JP 09510444
                 W 19971021 (199801)
                                              33p
    AU 689236
                  B 19980326 (199826)
    IL 112677
                  A 20000131 (200015)
    TW 400233
                  A 20000801 (200109)
    US 6338848
                  B1 20020115 (200208)
    EP 1179348
                  A2 20020213 (200219)
                                         EN
        R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
    EP 750509
                  B1 20020515 (200234)
                                        EN
        R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
    WO 9524918 A1 WO 1995-US2550 19950307; AU 9519749 A AU 1995-19749
    19950307; ZA 9500960 A ZA 1995-960 19950207; EP 750509 A1 EP 1995-912666
    19950307, WO 1995-US2550 19950307; JP 09510444 W JP 1995-524044 19950307,
    WO 1995-US2550 19950307; AU 689236 B AU 1995-19749 19950307; IL 112677 A
    IL 1995-112677 19950216; TW 400233 A TW 1995-101380 19950214; US 6338848
    B1 Cont of US 1994-212629 19940314, Cont of US 1995-560943 19951120, US
    2000-513380 20000225; EP 1179348 A2 Div ex EP 1995-912666 19950307, EP
    2001-117762 19950307; EP 750509 B1 EP 1995-912666 19950307, WO 1995-US2550
    19950307, Related to EP 2001-117762 19950307
FDT AU 9519749 A Based on WO 9524918; EP 750509 Al Based on WO 9524918; JP
    09510444 W Based on WO 9524918; AU 689236 B Previous Publ. AU 9519749,
    Based on WO 9524918; EP 1179348 A2 Div ex EP 750509; EP 750509 B1 Related
    to EP 1179348, Based on WO 9524918
PRAI US 1994-212629
                     19940314; US 1995-560943
                                                19951120; US 2000-513380
    20000225
    WO
         9524918 A UPAB: 19951102
    A method for treating in a mammalian subject an autoimmune condition
    comprises administering (i) an interleukin-I2 (IL-I2) antagonist
    or (ii) IL-I2.
         USE - The method is used partic. for autoimmune conditions which are
    promoted by increased levels of TNF-alpha or IFN-gamma (claimed). It can
    be used for treating multiple sclerosis, systemic lupus erythematosus,
    rheumatoid arthritis, autoimmune pulmonary inflammation,
    Ciuillan-Barre syndrome, autoimmune thyroiditis, insulin dependent
    diabetes mellitus or autoimmune inflammatory eye disease (claimed).
    Dwg.0/6
    ANSWER 18 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
    1995:101409 BIOSIS
    PREV199598115709
    Prevention of experimental autoimmune encephalomyelitis by
    antibodies against interleukin 12.
    Leonard, J. P. (1); Waldburger, K. E.; Goldman, S. J.
    (1) Genetics Inst., Preclinical Biol., 87 Cambridge Park Dr., Cambridge,
    MA 02140 USA
    Journal of Experimental Medicine, (1995) Vol. 181, No. 1, pp. 381-386.
    ISSN: 0022-1007.
    Article
    English
    Experimental allergic encephalomyelitis (EAE) is an autoimmune disease of
    the central nervous system that can be transferred to naive mice via CD4+
    T cells isolated from appropriately immunized mice. We have evaluated the
    effects of recombinant murine interleukin 12 (rmIL-12), a potent inducer
    of interferon gamma (IFN-gamma) and promoter of Th1 T cell development, on
    the course of adoptively transferred EAE. The transfer of lymph node cells
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(LNC) isolated from proteolipid protein (PLP)-primed animals and

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stimulated in vitro with PLP to naive mice resulted in a progressive paralytic disease culminating in complete hind limb paralysis in the majority of the recipients. When mice were injected with LNC that had been stimulated in vitro with PLP in the presence of rmIL-12, the subsequent course of disease was more severe and prolonged. The addition of $\mbox{rmIL-12}$ during the in vitro stimulation with PLP resulted in a 10-fold increase in IFN-gamma and a 2-fold increase in tumor necrosis factor (TNF) a in the supernatants, relative to LNC stimulated with PLP alone. However, neutralization of IFN-gamma or TNF-alpha in vitro with specific antibodies did not abrogate the ability of rmIL-12 to exacerbate the subsequent disease. Similarly, mice treated with rmIL-12 in vivo after the transfer of antigen-stimulated LNC developed a more severe and prolonged course of disease compared with vehicle-treated control animals. In contrast, treatment of mice with an antibody to murine IL-12 after cell transfer completely prevented paralysis, with only 40% of the mice developing mild disease. These results demonstrate that in vitro stimulation of antigen primed LNC with PLP and rmIL-12 enhances their subsequent encephalitogenicity. Furthermore, inhibition of endogenous IL-12 in vivo after LNC transfer prevented paralysis, suggesting that endogenous IL-12 plays a pivotal role in the pathogenesis of this model of autoimmune disease.

- L9 ANSWER 19 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 12
- AN 1993:343704 BIOSIS
- DN PREV199396040704
- TI Resolution of cutaneous leishmaniasis: Interleukin 12 initiates a protective T helper type 1 immune response.
- AU Sypek, Joseph P. (1); Chung, Charles L.; Mayor, Sharon E. H.; Subramanyam, Janaki M.; Goldman, Samuel L.; Sieburth, Derek S.; Wolf, Stanley F.; Schaub, Robert G.
- CS (1) Dep. Preclin. Biol., Genetics Inst. Inc., 87 Cambridge Park Dr., Cambridge, MA 02140 USA
- SO Journal of Experimental Medicine, (1993) Vol. 177, No. 6, pp. 1797-1802. ISSN: 0022-1007.
- DT Article
- LA English
- AΒ Resistance to Leishmania major in mice is associated with the appearance of distinct T helper type 1 (Th1) and Th2 subsets. T cells from lymph nodes draining cutaneous lesions of resistant mice are primarily interferon y (IFN-gamma)-producing Th1 cells. In contrast, T cells from susceptible mice are principally Th2 cells that generate interleukin 4 (IL-4). Although existing evidence is supportive of a role for IFN-gamma in the generation of Th1 cells, additional factors may be required for a protective response to be maintained. A potential candidate is IL -12, a heterodimeric cytokine produced by monocytes and B cells that has multiple effects on T and natural killer cell function, including inducing IFN-gamma production. Using an experimental leishmanial model we have observed that daily intraperitoneal administration at the time of parasite challenge of either 0.33 mu-g IL-12 (a consecutive 5 d/wk for 5 wk) or 1.0 mu-g IL-12 per mouse (only a consecutive 5 d) caused a gt 75% reduction in parasite burden at the site of infection, in highly susceptible BALB/c mice. Delay of treatment by 1 wk had less of a protective effect. Concomitant with these protective effects was an increase in IFN-gamma and a decrease in IL-4 production, as measured by enzyme-linked immunosorbent assay of supernatants generated from popliteal lymph node cells stimulated with leishmanial antigen in vitro. The reduction in parasite numbers induced by IL-12 therapy was still apparent at 10 wk postinfection. In addition, we observed that the administration of a rabbit anti-recombinant murine IL-12 polyclonal

antibody (200 mu-g i.p. every other day for 25 d) at the time of infection to resistant C57Bl/6 mice exacerbated disease. These effects were accompanied by a shift in IFN-gamma production in vitro by antigen-stimulated lymph node cells indicative of a Th2-like response. These findings suggest that IL-12 has an important role in initiating a Th1 response and protective immunity.

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L9 ANSWER 20 OF 20 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
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- AN 92231358 EMBASE
- DN 1992231358
- TI Observations, legends, and conjectures concerning restricted T-cell receptor usage and autoimmune disease.
- AU Esch T.; Clark L.; Zhang X.-M.; Goldman S.; Heber-Katz E.
- CS Wistar Institute, 3601 Spruce Street, Philadelphia, PA 19104, United States
- SO Critical Reviews in Immunology, (1991) 11/5 (249-264). ISSN: 1040-8401 CODEN: CCRIDE
- CY United States
- DT Journal; General Review
- FS 005 General Pathology and Pathological Anatomy
 - 026 Immunology, Serology and Transplantation
 - 030 Pharmacology
 - 037 Drug Literature Index
- LA English
- SL English
- AB It has become clear over the past few years that a variety of experimental autoimmune conditions are mediated by T cells bearing a highly restricted subset of antigen receptors. This restricted TcR usage raises important questions concerning not only the recognition of autoantigens, but also the pathogenic mechanisms underlying many models of autoimmunity. Furthermore, the extension of these findings in certain cases to human disease has raised the possibility of specific therapeutic immune intervention. In this review, we examine the available data on restricted T-cell receptor usage in autoimmune disorders and explore the interpretations and the theoretical and practical implications of these findings.

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             70 S E3
L6
           2059 S L1-L5
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            109 S L6 AND (IL-12 OR RA OR ARTHRITIS)
             43 S L7 AND (ANTIBOD? OR ANTAGONIST?)
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             20 DUP REM L8 (23 DUPLICATES REMOVED)
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109 S L6 AND (IL-12 OR RA OR ARTHRITIS)

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L10 ANSWER 1 OF 1 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
    2001:39565 BIOSIS
AN
DN
    PREV200100039565
    Myelin oligodendrocyte glycoprotein induced EAE in IL-12
TI
    p35 deficient mice.
ΑU
    Hunter, S. E. (1); Thibodeaux, D. K. (1); Bouchard, P. (1); Leonard,
     J. P. (1)
     (1) Genetics Institute, Inc., Cambridge, MA, 02140 USA
CS
    FASEB Journal, (April 20, 2000) Vol. 14, No. 6, pp. All16. print.
SO
    Meeting Info.: Joint Annual Meeting of the American Association of
     Immunologists and the Clinical Immunology Society Seattle, Washington, USA
    May 12-16, 2000
    ISSN: 0892-6638.
    Conference
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    English
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AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE
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               E OHARA RICHARD/AU
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             0 ANTAGONIST?
            14 FRAGMENT?
             0 EPITOP?
             0 L8 AND (FRAGMENT? OR EPITOP?)
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L9 CANNOT BE SEARCHED IN STNGUIDE
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=> s RA or rheumatoid arthritis

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- 0 ARTHRITIS
- O RHEUMATOID ARTHRITIS

(RHEUMATOID (W) ARTHRITIS)

L12 2 RA OR RHEUMATOID ARTHRITIS

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FULL ESTIMATED COST 0.48 91.97

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

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SESSION
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=> s 19 and (fragment? or epitop?)
L13 3 L9 AND (FRAGMENT? OR EPITOP?)

=> d bib ab 1-3

L13 ANSWER 1 OF 3 WPIDS (C) 2002 THOMSON DERWENT AN 2002-147853 [19] WPIDS DNC C2002-045892

TI Composition for modulating immune response, comprises a spore system having a spore and polypeptide, carbohydrate or nucleotide sequence having anti-pathogenic activity.

DC B04 D16

IN GOLDMAN, S; LATHROP, S J; LONGCHAMP, P F; WHALEN, R G

PA (MAXY-N) MAXYGEN INC

CYC 96

PI WO 2002000232 A2 20020103 (200219)* EN 137p

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2001073009 A 20020108 (200235)

ADT WO 2002000232 A2 WO 2001-US20372 20010626; AU 2001073009 A AU 2001-73009 20010626

FDT AU 2001073009 A Based on WO 200200232

PRAI US 2000-214161P 20000626

AB WO 200200232 A UPAB: 20020321

NOVELTY - A composition (I), comprising a spore system (II) having a spore and a peptide, polypeptide, protein, carbohydrate or nucleotide sequence having anti-pathogenic activity displayed on, bound to or contained within, the spore, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) releasing a spore system of interest, comprising:
- (a) transforming a cell capable of sporulation with an exogenous nucleic acid;
- (b) inducing sporulation of the cell, where at least one spore system is produced; and
 - (c) lysing the cell to release the spore system;
- (2) displaying a polypeptide at one or more sites of interest on a surface of a spore, comprising:
- (a) transforming a cell capable of sporulation with a recombinant nucleic acid vector, comprising a nucleic acid encoding a polypeptide fused in frame to a nucleic acid encoding a spore protein; and
- (b) expressing a fusion protein comprising the polypeptide and the spore coat protein so that the fusion protein is attached to the spore coat of the spore at one or more site of interest on the spore surface;
- (3) a detection system (DS) comprising (II) which comprises a moiety that provides a detectable signal and a polypeptide capable of capturing a detectable compound;
 - (4) delivery of a polypeptide of interest, comprising:
- (a) transforming a cell that is capable of sporulating with a nucleic acid encoding the polypeptide;
 - (b) inducing sporulation of the cell to form a spore; and
 - (c) delivering the spore to a site of interest;
 - (5) modulation of an adjuvant effect in an organism, comprising:
 - (a) generating a non-viable spore, having an adjuvant effect;
 - (b) isolating the spore; and
- (c) contacting the organism with the spore and a nucleic acid, polypeptide, or peptide; and
- (6) enhancing (M1) an immune response to an immunogenic polypeptide or peptide in a subject, comprising administering (I).

ACTIVITY - Antibacterial; virucide; anti-HIV (human immunodeficiency virus); cytostatic; neuroprotective; nootropic; hepatotropic; antipyretic; antiinflammatory; antirheumatic; antiarthritic; antidiabetic; immunosuppressive; antipsoriatic; antiallergic; antiasthmatic.

MECHANISM OF ACTION - Modulator of immune response (claimed); vaccine.

Spores from Bacillus subtilis were tested to determine if the spores

had an adjuvant effect. The specific immunological response of mice to spores and V-antigen mixed together was compared to the specific immunological response of mice to the V-antigen protein alone. 1 micro g, 0.5 micro g or 0.25 micro g of purified recombinant V-antigen was mixed with 5 multiply 108 non-recombinant B. subtilis spores or used alone. The three V-antigen protein/spore mixtures and three amounts of V-antigen protein were injected intraperitoneally into separate groups of mice, at days 1, 21 and 35. Mice were bled on days 10, 21 and 45. Serum was analyzed for specific and V-antigen immunoglobulins by an indirect enzyme linked immunosorbent assay (ELISA) using standard procedures. The presence of spores in the inoculum increased the antibody titer between 10-fold and 1000-fold, depending on the amount of protein inoculated. The data suggested that spores act to augment a specific immune response to immunogenic polypeptide, such as V-antigen protein.

USE - (I) is useful for modulating (producing or enhancing) an immune response of an organism, and for generating a desired product. DS is useful for detecting a compound. (All claimed). The spores are useful in production, packaging, delivering and presentation systems for industrial biocatalyst and in medical applications including immunization and vaccination. The spores are also useful as therapeutics and/or prophylactic agents, and as vaccines against a broad spectrum of immunogens and bacterial, viral and parasitic pathogens and toxins. The spores are also useful for production and immobilization of enzymes and proteins for industrial use, and in a variety of biotechnology settings as carriers for nucleic acids and biotin linked ligands. (II) is useful as sensor and detector. (II) is useful as a vaccine or immunomodulatory agent against a disease or disease causing pathogen including Staphylococcus sp., Streptococcus sp., viral encephalitis, human immunodeficiency virus (HIV), cytomegalovirus, poliomyelitus, rabies, cancer, typhoid, parasites, anthrax, foot and mouth disease, Alzheimer's disease, hepatitis, diphtheria, pertussis, hemorrhagic fevers, influenza, cholera, meningitis, measles, mumps, Lyme disease, tetanus, yellow fever and pneumonia. (I) is also useful for treating allergy, asthma, autoimmune diseases, e.g. rheumatoid arthritis, diabetes mellitus and multiple sclerosis, septic shock, organ transplantation and inflammatory conditions including inflammatory bowel syndrome, psoriasis, pancreatitis, and other immunodeficiencies. Dwg.0/12

L13 ANSWER 2 OF 3 WPIDS (C) 2002 THOMSON DERWENT

AN 2000-282570 [24] WPIDS

CR 1997-132638 [12]; 1997-165283 [15]; 2000-430395 [36]

DNC C2000-085202

TI Novel human CTLA-8 protein useful for treating immunodeficiencies and disorders, in regulating growth, proliferation and/or activity of T and/or B lymphocytes and multiple sclerosis, rheumatoid arthritis.

DC B04 D16

IN CARLIN, M; GIANNOTTI, J; GOLDEN-FLEET, M M; GOLDMAN, S; JACOBS, K; KELLEHER, K; MI, S; NEBEN, S; PITTMAN, D

PA (GEMY) GENETICS INST INC

CYC 1

PI US 6043344 A 20000328 (200024) * 25p

ADT US 6043344 A Provisional US 1995-35347P 19950719, CIP of US 1995-504032 19950719, CIP of US 1995-514014 19950811, Div ex US 1996-685239 19960718, US 1998-34810 19980304

FDT US 6043344 A CIP of US 5707829

PRAI US 1995-35347P 19950719; US 1995-504032 19950719; US 1995-514014 19950811; US 1996-685239 19960718; US 1998-34810 19980304

AB US 6043344 A UPAB: 20010711

NOVELTY - An isolated human CTLA-8 (B18) (I) with a fully defined sequence as given in the specification, is new.

DETAILED DESCRIPTION - (I) comprises a fully defined sequence of 163

(2) amino acids, amino acids 11-, 29- or 31-163 of (2), the **fragment** of (2) comprising amino acids 11-, 29- or 31-163 of (2), as given in the specification.

An INDEPENDENT CLAIM is also included for the preparation of (I).

ACTIVITY - Immunosuppressive; antiarthritic; antiinflammatory;
immunostimulant; antidiabetic; neuroprotective; dermatological;
antianemic; antiallergic; antithyroid; antiasthmatic; antibacterial;
cytostatic.

MECHANISM OF ACTION - Angiogenesis inhibitor; hematopoiesis regulator; growth or proliferation of vascular endothelial cells inhibitor; tumor growth inhibitor; myeloid, lymphoid cells or their progenitors proliferator; IFN- gamma , IL-3, GM-CSF production inducer; gene therapy. The ability of (I) to inhibit angiogenesis was examined in an angiostatic activity assay. Primary human umbilical cells (HUVECs) were seeded to 2 multiply 103 cells/well of a 96 well plate and incubated. The cells were then starved in M199 medium. Conditioned media containing B18 was obtained from transfected COS or stably expressing CHO cells and 1:10, 1:50, 1:250 and 1:1250 were prepared in M199-CS medium containing 100 ng/ml FGF. The dilutions of B18 were added to the starved cells and incubated for 72 hr at 37 deg. C. The cells were then radiolabeled and trypsinized for liquid scintillation counting, after washing. Results showed that human CTLA-8 (B18) inhibits angiogenesis.

USE - (I) is used for treating immune deficiencies and disorders (including severe combined immunodeficiency (SCID), e.g. in regulating growth and proliferation of T and/or B lymphocytes, and effecting the cytolytic activity of NK cells and other cell populations. These immune deficiencies may be genetic or caused by viruses, bacterial or fungal infections. The proteins are also used for boosting the immune system for treating cancer and in the treatment of autoimmune diseases such as multiple sclerosis, systemic lupus erythematosus, rheumatoid arthritis, autoimmune pulmonary inflammation, Guillain-Barre syndrome, autoimmune thyroiditis, insulin dependent diabetes mellitis, myasthenia gravis, graft-versus-host disease and autoimmune inflammatory eye disease. They are also used for treating asthma, allergic reactions or other respiratory problems and suppressing chronic or acute inflammation associated with infection such as septic shock or systemic inflammatory response syndrome (SIRS), inflammatory bowel disease and Crohn's disease. (I) is also used for regulating hematopoiesis and consequently in the treatment of myeloid or lymphoid deficiencies i.e. by supporting the growth and proliferation of erythroid progenitor cells, myeloid cells, megakaryocytes, hematopoietic stem cells and thus used for treating anemia, thrombocytopenia, aplastic anemia and paroxysmal nocturnal hemoglobinuria. They also inhibit the growth and proliferation of vascular endothelial cells and thus are effective in inhibiting angiogenesis. The polynucleotides encoding (I) can be used in gene therapy. The proteins are used as immunogens to produce polyclonal or monoclonal antibodies useful for performing diagnostic assays for CTLA-8.

DESCRIPTION OF DRAWING(S) - The figure shows the data relating to the ability of CTLA-8 to inhibit angiogenesis. Dwg.3/7

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L13 ANSWER 3 OF 3 WPIDS (C) 2002 THOMSON DERWENT
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AN 1997-132638 [12] WPIDS

CR 1997-165283 [15]; 2000-282570 [23]; 2000-430395 [36]

DNC C1997-042879

TI New nucleic acid encoding the CTLA-8 protein - modulates growth of vascular endothelial and haematopoietic cells and induces cytokine expression, for treating infection, auto-immune disease, etc..

DC B04 D16

IN CARLIN, M; JACOBS, K; KELLEHER, K; MCCOY, J M; GIANNOTTI, J; GOLDEN-FLEET, M; GOLDMAN, S; MI, S; NEBEN, S; PITTMAN, D; DUCKETT, M C; GOLDEN-FLEET, M M; PITMAN, D; CARLIN-DUCKETT, M

```
CYC 23
PΙ
     WO 9704097
                   A2 19970206 (199712) * EN
        RW: AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE
         W: AU CA JP MX
     AU 9667123
                   A 19970218 (199723)
                  A3 19970912 (199749)
     WO 9704097
     US 5707829
                  A 19980113 (199809)
                                              30p
     EP 839196
                   A2 19980506 (199822)
                                         EN
         R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
     JP 11510045 W 19990907 (199947)
                                              59p
     US 5969093
                  A 19991019 (199950)
     MX 9800507
                  A1 19980501 (200007)
     MX 9801120
                   A1 19990401 (200055)
     AU 727480
                   B 20001214 (200103)
     AU 727489
                   B 20001214 (200103)
     AU 2001028001 A 20010517 (200138)#
     AU 2001028002 A
                      20010802 (200152)#
    WO 9704097 A2 WO 1996-US11889 19960718; AU 9667123 A AU 1996-67123
     19960218; US 5707829 A US 1995-514014 19950811; EP 839196 A2 EP
     1996-927237 19960718, WO 1996-US11889 19960718; JP 11510045 W WO
     1996-US11889 19960718, JP 1997-506846 19960718; US 5969093 A Div ex US
     1995-514014 19950811, US 1997-833823 19970410; MX 9800507 A1 MX 1998-507
     19980116; MX 9801120 A1 MX 1998-1120 19980210; AU 727480 B AU 1996-67123
     19960718; AU 727489 B AU 1996-67685 19960808; AU 2001028001 A Div ex AU
     1996-67685 19960808, AU 2001-28001 20010314; AU 2001028002 A Div ex AU
     1996-67123 19960718, AU 2001-28002 20010314
FDT AU 9667123 A Based on WO 9704097; EP 839196 A2 Based on WO 9704097; JP
     11510045 W Based on WO 9704097; AU 727480 B Previous Publ. AU 9667123,
     Based on WO 9704097; AU 727489 B Previous Publ. AU 9667685, Based on WO
     9707198; AU 2001028001 A Div ex AU 727489; AU 2001028002 A Div ex AU
     727480
PRAI US 1995-514014
                      19950811; US 1995-504032
                                                 19950719; US 1997-833823
     19970410; WO 1996-US12897 19960808; AU 2001-28001
                                                           20010314; AU
     2001-28002
                   20010314
AΒ
          9704097 A UPAB: 20011001
     WO
     A novel isolated polynucleotide (I) comprises: (a) nucleotides (nt)
     146-544 of an 813 bp sequence given in the specification; (b) a sequence
     able to hybridise with (a) or varying from (a) only within the degeneracy
     of the genetic code; or (c) an allelic variant of (a). Also claimed are:
     (1) host cells transformed with (I); (2) isolated human CTLA-8 protein
     which has 163 amino acids (aa), its 11-163, 29-163 or 31-163 regions or
     any fragments of them with CTLA-8 activity; and (3)
     antibodies (Ab) which specifically react with CTLA-8 protein.
          USE - (I) encodes proteins with CTLA-8 activity. Treatment of mammals
     with CTLA-8 (or non-human analogues or IL-17) results in at least one of:
     (a) inhibition of angiogenesis, growth/proliferation of vascular
     endothelial cells, tumour cells and angiogenesis-dependent tissue growth;
     (b) proliferation of myeloid, erythroid or lymphoid cells (or their
     progeny); or (c) induction of interferon- gamma , IL-3 or GM-CSF prodn
     (claimed). Opt. CTLA-8 is expressed in vivo from a suitable vector.
     Typical applications of CTLA-8 are treatment of immune deficiency and
     disorders requiring modulation of T/B cell growth or proliferation, or of
     cytolytic natural killer cells, e.g. viral or microbial infection (e.g.
     HIV, hepatitis, malaria, candidiasis etc.); autoimmune disease (e.g.
    multiple sclerosis, rheumatoid arthritis, insulin-dependent
     diabetes etc.); to boost the immune response in cancer treatment; as
     antiinflammatories (e.g. in septic shock or Crohn's disease) and in
    haematopoietic disorders where growth/proliferation of erythroid, myeloid
     or megakaryocytic cells is needed. Ab can be used to determine CTLA-8,
     possibly also for treating some tumours or some of the above conditions.
     Dwg.0/7
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(GEMY) GENETICS INST INC

PA

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p40 production by anti-CD3 was abrogated by anti-CD154
     antibody. IL-12 p40 production was
     also increased by LPS stimulation. LPS-stimulated IL-12
    · production was inhibited by anti-TNFalpha antibody, but not by T
     cell depletion and anti-CD154 antibody treatment. The TNFalpha
     inhibitor rolipram inhibited LPS-stimulated IL-12
     p40 production by RA SC more strongly than spontaneous
     production. TNFalpha restored LPS-stimulated IL-12
     production that had been inhibited by rolipram. Conclusion: IL-
     12 production in RA is regulated by 2 different
     pathways. One pathway is T cell dependent, predominantly through a
     CD40-CD154 interaction, while the other is T cell independent, mediated
     through TNFalpha. Inhibition of IL-12 production by
     interference with CD40-CD154 interaction and TNFalpha production may be a
     potential therapeutic strategy for treating RA.
L19 ANSWER 2 OF 18 WPIDS (C) 2002 THOMSON DERWENT
     2001-244560 [25]
                        WPIDS
    C2001-073385
     Composition comprising interleukin-12 p40 and IL-B30 polypeptide
     or its segment, useful for ameliorating rheumatoid
     arthritis, osteoarthritis, atherosclerosis, multiple sclerosis,
     vasculitis and tumor.
     B04 D16
     DE WAAL MALEFYT, R; KASTELEIN, R A; LIRA, S A; NARULA, S K; OPPMANN, B;
     RENNICK, D M; WIEKOWSKI, M T
     (SCHE) SCHERING CORP
     92
     WO 2001018051 A2 20010315 (200125) * EN
                                              69p
        RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
            NL OA PT SD SE SL SZ TZ UG ZW
        W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CZ DE DK DM DZ
            EE ES FI GB GD GE HR HU ID IL IN IS JP KG KR KZ LC LK LR LT LU LV
            MA MD MG MK MN MX MZ NO NZ PL PT RO RU SE SG SI SK SL TJ TM TR TT
            TZ UA UZ VN YU ZA
     AU 2000073608 A 20010410 (200137)
                  A2 20020605 (200238)
     EP 1210434
         R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
ADT WO 2001018051 A2 WO 2000-US24686 20000908; AU 2000073608 A AU 2000-73608
     20000908; EP 1210434 A2 EP 2000-961688 20000908, WO 2000-US24686 20000908
    AU 2000073608 A Based on WO 200118051; EP 1210434 A2 Based on WO 200118051
PRAI US 1999-164616P 19991110; US 1999-393090
                                                 19990909
     WO 200118051 A UPAB: 20010508
     NOVELTY - A composition (I) comprising a substantially pure polypeptide
     comprising a number of distinct segments of at least 7 contiguous amino
     acids from interleukin (IL)-12 p40 and/or
     IL-B30, and a substantially pure polypeptide comprising a segment of at
     least 11 contiguous amino acids from IL-12 p40
     and/or IL-B30.
          DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the
     following:
          (1) an isolated or recombinant nucleic acid (II) encoding (I);
          (2) a cell (III) comprising (II);
          (3) a nucleic acid (IV) which hybridizes under wash conditions of 30
    minutes at 50 deg. C and less than 1M salt to the natural mature coding
    portion of primate IL-12 p40 and IL-B30;
          (4) an antagonist (V) of IL-12
    p40/IL-B30 combined with a tumor necrosis factor-alpha (TNF alpha
     ) antagonist, an IL-12 antagonist,
     IL-10, or steroids;
          (5) a binding compound (VI) comprising an antigen binding site from
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DC

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DNC TI

an antibody, which specifically binds to (I) and comprising a substantially pure polypeptide comprising IL-12 p40 and IL-B30 polypeptide, or a polypeptide comprising IL-12 p40 fused to IL-B30, but not to either IL-12 p40 or IL-B30 polypeptide;

- (6) a kit (VII) comprising:
- (a) (I), and a compartment comprising the polypeptide, or instructions for use or disposal of reagents in the kit;
- (b) (II), and a compartment comprising (II), a compartment further comprising a primate ${\tt IL-12~p40}$ or ${\tt IL-B30}$, or instructions for use or disposal of reagents in the kit or (VI); and
- (c) a compartment comprising (VI), or instructions for use or disposal of reagents in the kit;
- (7) producing (M1) an antigen:antibody complex, involves contacting, under appropriate conditions, a primate IL12 p40/IL-B30 composition with (VI), allowing the complex to form;
- (8) a composition (VIII) comprising (VI) which is sterile, or (VI) and a carrier such as an aqueous compound, including water, saline, and/or buffer;
- (9) increasing (M2) the secretion of a primate IL-B30 involves expressing the polypeptide with IL-12 p40 or increasing the secretion of a primate IL-12 p40 involves expressing the IL-12 p40 with IL-B30; and
- (10) screening (M3) for a receptor which binds (I) involves contacting the complex to a cell expressing the receptor under conditions allowing the complex to bind to the receptor, forming a detectable interaction.

ACTIVITY - Antirheumatic; antiarthritic; osteopathic; antiarthritic; neuroprotective; antiarteriosclerotic; cerebroprotective; vasotropic; cytostatic; antitumor; immunosuppressive.

MECHANISM OF ACTION - Modulator of physiology or development of cell in host; inducer of memory T-cell proliferation (claimed); modulator of trafficking or activation of leukocyte.

No supporting data is given.

USE - (I) is useful for modulating physiology or development of a cell or tissue in a host organism by contacting the cell with (I) or (V), resulting in an increased or decreased production of Interferon-gamma (IFN gamma), an enhanced Th1 response such as anti-tumor effect, adjuvant effect, anti-viral effect or antagonized allergic effect, and amelioration of an autoimmune condition or a chronic inflammatory condition. The contacting is in combination with IL-18, IL-12, radiation therapy or chemotherapy, an immune adjuvant or an anti-viral therapeutic. The antagonist is an antibody against IL-12 receptor subunit beta 1. The antagonist or agonist of mammalian IL-B30 protein is useful for modulating the inflammatory response in an animal, by contacting cells in the animal with the agonist or antagonist, where the animal exhibits signs or symptoms of an acute phase inflammatory response in skin, lung, gastrointestinal, or liver tissue. The modulation is accelerating maturation of neutrophils into platelets and has an effect on immunoglobin A and G (IgA and IgG) . The antagonist is an antibody which binds to the mammalian IL-B30 or blocks signaling mediated by mammalian IL-B30. The antagonist or agonist is administered in combination with an anti-inflammatory cytokine agonist or antagonist, an analgesic, an anti-inflammatory agent, or a steriod. IL-B30 or its agonist is useful inducing the proliferation of memory T-cells (all claimed).

Agonist or antagonist of IL-B30 protein is useful for modulating the trafficking or activation of a leukocyte in an animal experiencing science or symptoms of autoimmunity, an inflammatory

or heteroaryl; each of R.sub.2, R.sub.4, and R.sub.5, independently, is R.sup.c, halogen, nitro, nitroso, cyano, azide, isothionitro, SR.sup.c, or OR.sup.c; R.sub.3 is R.sup.c, alkenyl, alkynyl, aryl, heteroaryl, cyclyl, heterocyclyl, OR.sup.c, OC(O)R.sup.c, SO.sub.2R.sup.c, S(O)R.sup.c, S(O.sub.2)NR.sup.cR.sup.d, SR.sup.c, NR.sup.cR.sup.d, NR.sup.cCOR.sup.d, NR.sup.cC(O)OR.sup.d, NR.sup.cC(O)NR.sup.cR.sup.d, NR.sup.cSO.sub.2R.sup.d, COR.sup.c, C(O)OR.sup.c, or C(O)NR.sup.cR.sup.d; n is 0, 1, 2, 3, 4, 5, 6, or 7; X is O, S, S(O), S(O.sub.2), or NR.sup.c; Y is a covalent bond, CH.sub.2, C(O), C.dbd.N--R.sup.c, C.dbd.N--OR.sup.c, C.dbd.N--SR.sup.c, O, S, S(O), or S(O.sub.2); Z is N; and W is O, S, S(O), S(O.sub.2), NR.sup.c, or NC(O)R.sup.c; in which each of R.sup.a and R.sup.b, independently, is H, alkyl, aryl, heteroaryl; and each of R.sup.c and R.sup.d, independently, is H, alkyl, or alkylcarbonyl.

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L19 ANSWER 5 OF 18 USPATFULL
AN
       2001:229210 USPATFULL
TΙ
       Methods for enhancing oral tolerance and treating autoimmune disease
       using inhibitors of interleukin-12
       Strober, Warren, Bethesda, MD, United States
TN
       Kelsall, Brian, Washington, DC, United States
       Marth, Thomas, Kensington, MD, United States
PA
       Government of the United States of America, Department of Health and
       Human Services (U.S. corporation)
       US 2001051159
PΙ
                          A1
                               20011213
       US 2000-732502
ΑI
                          A1
                               20001207 (9)
RLI
       Continuation of Ser. No. US 1999-284169, filed on 9 Apr 1999, ABANDONED
       A 371 of International Ser. No. WO 1996-US16007, filed on 11 Oct 1996,
       UNKNOWN
DT
       Utility
FS
       APPLICATION
       mary 1. miller THE CANDLER BUILDING, needle & rosenberg, p.c., 127
LREP
       peachtree street, n.e., atlanta, GA, 30303-1811
       Number of Claims: 20
CLMN
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
LN.CNT 1252
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention provides a method for enhancing oral tolerance to
AΒ
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an antigen associated with an autoimmune disease in a subject having the autoimmune disease comprising orally administering to the subject an antigen associated with the autoimmune disease and administering an inhibitor of interleukin-12 in amounts sufficient to enhance oral tolerance. Also provided in the present invention is a method for treating or preventing an autoimmune disease in a subject comprising orally administering to the subject an antigen associated with the autoimmune disease and administering an inhibitor of interleukin-12 in amounts sufficient to treat or prevent the autoimmune disease, thereby treating or preventing the autoimmune disease.

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L19 ANSWER 6 OF 18 USPATFULL
AN
       2001:221075 USPATFULL
ΤI
       Retinoid antagonists and use thereof
IN
       Bollag, Werner, Basel, Switzerland
       Klaus, Michael, Weil am Rhein, Germany, Federal Republic of
       Mohr, Peter, Basel, Switzerland
       Panina-Bordignon, Paola, Milan, Italy
       Rosenberger, Michael, Caldwell, NJ, United States
       Sinigaglia, Francesco, Milan, Italy
PΑ
       Hoffman-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
PΙ
       US 6326397
                          В1
                             20011204
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US 1999-307009
                                19990507 (9)
AΙ
       Continuation-in-part of Ser. No. US 1998-189189, filed on 10 Nov 1998
RLI
DT
       Utility
       GRANTED
FS
EXNAM
       Primary Examiner: Killos, Paul J.
       Johnston, George W., Parise, John P.
LREP
CLMN
       Number of Claims: 16
ECL
       Exemplary Claim: 1
DRWN
       7 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 1573
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       The present invention relates to novel retinoid antagonists of the
       formula I ##STR1##
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wherein the dotted bond can be either hydrogenated or form a double bond; and, when the dotted bond forms a double bond, R.sup.1 is lower alkyl and R.sup.2 is hydrogen; and, when the dotted bond is hydrogenated, R.sup.1 and R.sup.2 taken together are methylene to form a cis-substituted cyclopropyl ring; R.sup.3 is hydroxy or lower alkoxy; R.sup.4 is alkyl or alkoxy; and R.sup.5 and R.sup.6 are, independently, a C.sub.4-12 alkyl or a 5-12 cycloalkyl substituent containing from 1-3 rings which are either unsubstituted or substituted with from 1-3 lower alkyl groups, with the carbon atom of R.sup.5 and R.sup.6 being linked to the remainder of the molecule to form a quaternary carbon atom pharmaceutically acceptable salts of carbocylic acids of the formula I; as well as method for the treatment of osteoporosis and preneoplastic and neoplastic diseases, and a method for reducing or abolishing adverse events in subjects receiving retinoid agonist treatment by administering a retinoid antagonist.

```
L19 ANSWER 7 OF 18 USPATFULL
       2001:63494 USPATFULL
AN
ΤI
       Antibodies against human IL-12
IN
       Gately, Maurice Kent, Parsippany, NJ, United States
       Presky, David Howard, Glen Ridge, NJ, United States
       Hoffman-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
PA
PΙ
       US 6225117
                          В1
                               20010501
ΑI
       US 1999-232522
                               19990119 (9)
PRAI
       US 1998-72333P
                           19980123 (60)
DT
       Utility
FS
       Granted
EXNAM
       Primary Examiner: Chan, Christina Y.; Assistant Examiner: DiBrino,
LREP
       Johnston, George W., Rocha-Tramaloni, Patricia S., Silverman, Robert A.
CLMN
       Number of Claims: 23
ECL
       Exemplary Claim: 1
       7 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 1122
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       The present invention relates to novel p75 heterodimer specific
       anti-human IL-12 antibodies that are
       characterized by a higher potency and greater efficacy in neutralizing
       human IL-12 bioactivity than known heterodimer
       specific IL-12 monoclonal antibodies. The
       heterodimer specific antibodies recognize one or more
       epitopes of the human IL-12 p75 heterodimer,
       but do not bind to the p40 subunit alone. The heterodimer
       specific IL-12 antibodies neutralize
       rhesus monkey IL-12 bioactivity with a potency
       similar to their potency for neutralizing human IL-12
       bioactivity making them useful IL-12 antagonists for
       in vivo studies in the rhesus monkey.
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L19 ANSWER 8 OF 18 USPATFULL
       2000:138395 USPATFULL
AN
TI
       Treatment of T-helper cell type 2-mediated immune disease by retinoid
       antagonists
IN
       Bollag, Werner, Basel, Switzerland
       Klaus, Michael, Weil am Rhein, Germany, Federal Republic of
       Panina-Bordignon, Paola, Milan, Italy
       Sinigaglia, Francesco, Milan, Italy
PA
       Hoffmann-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
PΤ
       US 6133309
                               20001017
       US 1998-189189
ΑI
                               19981110 (9)
       EP 1997-119776
PRAI
                           19971112
DT
       Utility
FS
       Granted
EXNAM
       Primary Examiner: Travers, Russell
       Johnston, George W., Epstein, William H., Parise, John P.
CLMN
       Number of Claims: 37
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
LN.CNT 780
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Retinoids with retinoid receptor antagonistic activity, pharmaceutically
       acceptable salts and pharmaceutically acceptable hydrolyzable esters
       thereof, have been found efficacious in treating T-helper cell type 2
       (Th2)-mediated immune diseases, such as immunoglobulin E (IgE)-mediated
       allergic diseases.
L19 ANSWER 9 OF 18 USPATFULL
       2000:98551 USPATFULL
AN
ΤI
       Treatment of papillomavirus-associated lesions
IN
       Stanley, Margaret Anne, Cambridge, United Kingdom
       Scarpini, Cinzia Giuseppina, Cambridge, United Kingdom
       Cambridge University Technical Services, Ltd., Cambridge, United Kingdom
PA
       (non-U.S. corporation)
PΙ
       US 6096869
                               20000801
       US 1996-621841
ΑI
                               19960322 (8)
                           19950322
PRAI
       GB 1995-5784
DT
       Utility
FS
       Granted
       Primary Examiner: Park, Hankyel
EXNAM
LREP
       Klarquist Sparkman Campbell Leigh & Whinston, LLP
CLMN
       Number of Claims: 13
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
LN.CNT 1293
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       Interleukin-12 (IL-12) or a functional analogue
       thereof, or a polynucleotide encoding IL-12 or
       encoding a functional analogue thereof, is used as a therapeutic
       material or adjuvant in treating papillomavirus-associated lesions e.g.
       warts due to HPV 6 and/or 11, e.g. condyloma acuminata. IL-
       12 or a vector encoding it for endogenous production can be used
       together with a vaccine such as a papillomavirus antigen, or a vector
       encoding a papillomavirus antigen.
L19 ANSWER 10 OF 18 USPATFULL
AN
       2000:87729 USPATFULL
ΤI
       Method of converting a Th2-type allergic immune response into a Th1-type
       immune response
IN
       DeKruyff, Rosemarie H., Stanford, CA, United States
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Umetsu, Dale T., Stanford, CA, United States

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The Board of Trustees of the Leland Stanford Junior University, Palo
PA
       Alto, CA, United States (U.S. corporation)
PΙ
       US 6086898
                               20000711
ΑI
       US 1999-339068
                               19990623 (9)
       US 1998-90390P
                           19980623 (60)
PRAI
DT
       Utility
FS
       Granted
EXNAM
       Primary Examiner: Chan, Christina Y.; Assistant Examiner: Ewoldt, Gerald
LREP
       Bozicevic, Field & Francis, Sherwood, Pamela
CLMN
       Number of Claims: 19
ECL
       Exemplary Claim: 1
DRWN
       17 Drawing Figure(s); 10 Drawing Page(s)
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ΑB
       Methods are provided for the treatment of allergic and other immune
       disorders associated with overproduction of Th2 type cytokines by
       antigen specific T cells. Immunotherapy with adjuvants, as provided in
       the present invention, greatly inhibits the development of airway
       hyperreactivity and airway inflammation. Such immunotherapy is shown to
       reverse ongoing airway disease, and convert allergic inflammatory
       responses into protective immune responses. Conditions of particular
       interest include allergic conditions associated with production of Th2
       cytokines and/or IgE antibodies, asthma, allergic rhinitis,
       and anaphylactic reactions. The addition of adjuvant induces a Th1-type
       immune response and can redirect an established Th2-type response to a
       Th1-type response for the selected antigen. Preferably, antigen-specific
       IgE production is reduced without altering the intensity of the
       antigen-specific proliferative response. One particularly preferred
       adjuvant for use in accordance with the present invention is a Listeria
       adjuvant.
L19 ANSWER 11 OF 18 USPATFULL
AN
       2000:87707 USPATFULL
TI
       Methods and compositions for the inhibition of interleukin-12 production
       Karp, Christopher L., Lutherville, MD, United States
TN
       Trinchieri, Giorgio, Wynnewood, PA, United States
       Wysocka, Maria, Wynnewood, PA, United States
       Griffin, Diane E., Hunt Valley, MD, United States
PA
       The Wistar Insitute, Philadelphia, PA, United States (U.S. corporation)
       Johns Hopkins University, Baltimore, MD, United States (U.S.
       corporation)
       US 6086876
                               20000711
PΙ
ΑI
       US 1998-19862
                               19980206 (9)
PRAI
       US 1997-37722P
                           19970207 (60)
DT
       Utility
FS
       Granted
EXNAM
       Primary Examiner: Kemmerer, Elizabeth; Assistant Examiner: Romeo, David
LREP
       Akin, Gump, Strauss, Hauer & Feld, L.L.P.
CLMN
       Number of Claims: 12
ECL
       Exemplary Claim: 1
       13 Drawing Figure(s); 18 Drawing Page(s)
LN.CNT 1487
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       The invention includes compositions and methods for selective
       suppression of IL-12 production in a cell. Methods
       of treating a human having a disease associated with dysregulated
       IL-12 production are also provided.
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L19 ANSWER 12 OF 18 USPATFULL 2000:50737 USPATFULL

ΑN

formula ##STR1## wherein A is a single or double bond, B.sup.1 and B.sup.2 are each independently CH.dbd.CH or C.tbd.C, T is CH.sub.2 or CH.sub.2 CH.sub.2, X is --CH.sub.2 -- or >C.dbd.CH.sub.2, R.sup.1 is H, F or OH, R.sup.2 and R.sup.3 are each independently lower alkyl or CF.sub.3, or C(R.sup.2, R.sup.3) is C.sub.3-6 -cycloalkyl, are useful in the treatment or prevention of vitamin D dependent disorders and of IL-12-dependent autoimmune diseases, particularly psoriasis, basal cell carcinomas, disorders of keratinization and keratosis, leukemia, osteoporosis, hyperparathyroidism accompanying renal failure, multiple sclerosis, transplant rejection, graft vs. host disease, rheumatoid arthritis, insulin-dependent diabetes mellitus, inflammatory bowel disease, septic shock and allergic encephalomyelitis. L19 ANSWER 14 OF 18 USPATFULL AN 1999:75759 USPATFULL Low affinity human IL-12 beta2 receptor TI IN Gubler, Ulrich Andreas, Glen Ridge, NJ, United States Presky, David Howard, Glen Ridge, NJ, United States PA Hoffmann-La Roche Inc., Nutley, NJ, United States (U.S. corporation) PΙ US 5919903 19990706 ΑI US 1997-914520 19970819 (8) Division of Ser. No. US 1996-685118, filed on 23 Jul 1996 RLI PRAI US 1995-1701P 19950801 (60) DTUtility Granted EXNAM Primary Examiner: Draper, Garnette D. Johnston, George W., Rocha-Tramaloni, Patricia S., Silverman, Robert A. LREP Number of Claims: 2 CLMN ECL Exemplary Claim: 1 No Drawings DRWN LN.CNT 1531 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AΒ A recombinant human IL-12 receptor complex produced on the surface of a non-human mammalian cell and free from other human proteins, the complex comprising the betal receptor protein complexed with a beta2 receptor protein, which complex is capable of binding to human IL-12 with high affinity. A recombinant human IL-12 beta2 receptor protein produced on the surface of a non-human mammalian cell, free from other human proteins, in its active form. In addition, a non-human mammalian cell having expressed on its surface the recombinant human IL-12 beta2 receptor protein or the recombinant human IL-12 receptor complex, which cell proliferates in the presence of human IL-12. A non-human mammalian cell having the human IL-12 beta2 receptor protein or the complex expressed on its surface and which proliferates in response to human IL-12 is useful for determining whether a given compound inhibits biological activity of human IL-12 or is an IL-12 agonist. L19 ANSWER 15 OF 18 USPATFULL

ΑN

1998:160106 USPATFULL

```
Antibodies to receptors for human interleukin-12
TI
       Gubler, Ulrich Andreas, Glen Ridge, NJ, United States
ΙN
       Presky, David Howard, Glen Ridge, NJ, United States
PA
       Hoffmann-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
       US 5852176
PI
                               19981222
       US 1997-915495
                               19970820 (8)
ΑI
RLI
       Division of Ser. No. US 1996-685118, filed on 23 Jul 1996
       US 1995-1701P
PRAI
                      19950801 (60)
DT
       Utility
       Granted
FS
EXNAM
       Primary Examiner: Draper, Garnette D.
       Johnston, George W., Rocha-Tramaloni, Patricia S., Silverman, Robert A.
CLMN
       Number of Claims: 1
ECL
       Exemplary Claim: 1
       No Drawings
DRWN
LN.CNT 1381
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       Antibodies to human IL-12 beta 2 receptor
       protein or an IL-12 receptor complex, the complex
       comprising the betal receptor protein complexed with a beta2 receptor
       protein, which complex is capable of binding to human IL-
       12 with high affinity.
L19 ANSWER 16 OF 18 USPATFULL
AN
       1998:147252 USPATFULL
TI
       DNA encoding receptors for the beta-2 chain of human IL-
       Gubler, Ulrich Andreas, Glen Ridge, NJ, United States
IN
       Presky, David Howard, Glen Ridge, NJ, United States
PA
       Hoffmann-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
PΙ
       US 5840530
                               19981124
AΙ
       US 1996-685118
                               19960723 (8)
       US 1995-1701P
PRAI
                           19950801 (60)
       US 1996-18674P
                           19960530 (60)
DT
       Utility
FS
       Granted
EXNAM
       Primary Examiner: Draper, Garnette D.
       Johnston, George W., Rocha-Tramaloni, Patricia S., Silverman, Robert A.
LREP
CLMN
       Number of Claims: 12
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
LN.CNT 1424
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       A recombinant human IL-12 beta2 receptor protein
       produced on the surface of a non-human mammalian cell, free from other
       human proteins, in its active form. In addition, a non-human mammalian
       cell having expressed on its surface the recombinant human IL-
       12 beta2 receptor protein, which cell proliferates in the
       presence of human IL-12. A non-human mammalian cell
       having the human IL-12 beta2 receptor protein on its
       surface and which proliferates in response to human IL-
       12 is useful for determining whether a given compound inhibits
       biological activity of human IL-12 or is an
       IL-12 agonist.
L19 ANSWER 17 OF 18 USPATFULL
AN
       1998:135151 USPATFULL
TΙ
       Human receptor for interleukin-12
       Chua, Anne On, Wayne, NJ, United States
IN
       Gubler, Ulrich Andreas, Glen Ridge, NJ, United States
PΑ
       Hoffmann-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
       US 5831007
PΙ
                               19981103
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US 1995-419652
                               19950411 (8)
ΑI
       Division of Ser. No. US 1994-248532, filed on 31 May 1994, now patented,
RLI
       Pat. No. US 5536657 which is a continuation-in-part of Ser. No. US
       1993-94713, filed on 19 Jul 1993, now abandoned
DT
       Utility
       Granted
FS
EXNAM
      Primary Examiner: Ulm, John
       Johnston, George W., Epstein, William H., Bucholz, Briana C.
LREP
       Number of Claims: 10
CLMN
       Exemplary Claim: 1
ECL
DRWN
       35 Drawing Figure(s); 26 Drawing Page(s)
LN.CNT 1937
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       This invention relates to substantially pure Interleukin-12 receptor
       cDNAs and protein and uses therefore. The Interleukin-12 receptor is
       shown to be a member of the cytokine receptor superfamily and has a high
       homology to human gp130.
L19 ANSWER 18 OF 18 USPATFULL
       96:63048 USPATFULL
AN
TI
       Recombinant DNA encoding human receptor for interleukin-12
IN
       Chua, Anne O., Wayne, NJ, United States
       Gubler, Ulrich A., Glen Ridge, NJ, United States
       Hoffmann-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
PA
PΙ
       US 5536657
                                19960716
ΑI
       US 1994-248532
                               19940531 (8)
       Continuation-in-part of Ser. No. US 1993-94713, filed on 19 Jul 1993,
RLI
       now abandoned
       Utility
DT
FS
       Granted
EXNAM Primary Examiner: Ulm, John
LREP
       Gould, George M., Johnston, George W., Kass, Alan P.
       Number of Claims: 10
CLMN
ECL
       Exemplary Claim: 1
       34 Drawing Figure(s); 25 Drawing Page(s)
LN.CNT 1755
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       This invention relates to substantially pure Interleukin-12 receptor
AB
       cDNAs and protein and uses therefore. The Interleukin-12 receptor is
       shown to be a member of the cytokine receptor superfamily and has a high
       homology to human gp130.
=> d his
     (FILE 'HOME' ENTERED AT 11:40:44 ON 11 JUL 2002)
     FILE 'BIOSIS, MEDLINE, AGRICOLA, EMBASE, CABA, WPIDS, JAPIO, BIOTECHDS,
     LIFESCI, CAPLUS, USPATFULL, USPAT2' ENTERED AT 11:42:50 ON 11 JUL 2002
                E LEONARD JOHN P/AU
            108 S E3-E5
T<sub>1</sub>1
                E LEONARD J P/AU
L2
            359 S E3-E4
                E GOLDMAN SAMUEL/AU
L3
            · 78 S E2-E9
                E GOLDMAN S/AU
L4
           1458 S E3
                E OHARA RICHARD/AU
                E OHARA R/AU
L5
             70 S E3
           2059 S L1-L5
L6
L7
            109 S L6 AND (IL-12 OR RA OR ARTHRITIS)
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rs
             43 S L7 AND (ANTIBOD? OR ANTAGONIST?)
             20 DUP REM L8 (23 DUPLICATES REMOVED)
L9
L10
              1 S L9 AND P40
     FILE 'STNGUIDE' ENTERED AT 11:51:09 ON 11 JUL 2002
L11
              0 S L8 AND (FRAGMENT? OR EPITOP?)
L12
              2 S RA OR RHEUMATOID ARTHRITIS
     FILE 'BIOSIS, MEDLINE, AGRICOLA, EMBASE, CABA, WPIDS, JAPIO, BIOTECHDS,
     LIFESCI, CAPLUS, USPATFULL, USPAT2' ENTERED AT 11:55:50 ON 11 JUL 2002
L13
              3 S L9 AND (FRAGMENT? OR EPITOP?)
L14
         656173 S RA OR RHEUMATOID ARTHRITIS
L15
           1079 S L14 AND IL-12
            724 S L15 AND (ANTIBOD? OR EPITOP? OR FRAGMENT? OR ANTAGONIST)
L16
L17
             95 S L16 AND IL-12 (5A) ANTIBOD?
L18
             82 DUP REM L17 (13 DUPLICATES REMOVED)
L19
             18 S L18 AND P40
=> s 116 and IL-12 (5a) antagonist?
            52 L16 AND IL-12 (5A) ANTAGONIST?
=> dup rem 120
PROCESSING COMPLETED FOR L20
             44 DUP REM L20 (8 DUPLICATES REMOVED)
=> d bib ab 1-44
L21 ANSWER 1 OF 44 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
ΑN
     2002:166945 BIOSIS
DN ·
     PREV200200166945
     Use of IL-12 and IL-12
     antagonists in the treatment of autoimmune diseases.
ΑU
     Leonard, John (1); Goldman, Samuel; O'Hara, Richard, Jr.
CS
     (1) Auburn, NH USA
     ASSIGNEE: Genetics Institute, Inc.
     US 6338848 January 15, 2002
PΙ
     Official Gazette of the United States Patent and Trademark Office Patents,
SO
     (Jan. 15, 2002) Vol. 1254, No. 3, pp. No Pagination.
     http://www.uspto.gov/web/menu/patdata.html. e-file.
     ISSN: 0098-1133.
DT
     Patent
LA
     English
AΒ
     Method of treating autoimmune conditions are disclosed comprising
     administering to a mammalian subject IL-12 or an
     IL-12 antagonist. In certain preferred
     embodiments the autoimmune condition is one which is promoted by an
     increase in levels of IFN-gamma or TNF-alpha. Suitable conditions for
     treatment include multiple sclerosis, systemic lupus erythematosus,
     rheumatoid arthritis, autoimmune pulmonary inflammation,
     Guillain-Barre syndrome, autoimmune thyroiditis, insulin dependent
     diabetes melitis and autoimmune inflammatory eye disease.
L21 ANSWER 2 OF 44 USPATFULL
       2002:165194 USPATFULL
AN
TΙ
       Nucleic acids, proteins, and antibodies
       Rosen, Craig A., Laytonsville, MD, UNITED STATES
IN
       Ruben, Steven M., Olney, MD, UNITED STATES
       Barash, Steven C., Rockville, MD, UNITED STATES
PΙ
       US 2002086823
                               20020704
                          Α1
ΑI
       US 2001-764889
                          A1
                               20010117 (9)
PRAI
       US 2000-179065P
                           20000131 (60)
```

DT Utility FS APPLICATION

LREP HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850

CLMN Number of Claims: 24 ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 17471

AΒ

The present invention relates to novel respiratory system related polynucleotides and the polypeptides encoded by these polynucleotides herein collectively known as "respiratory system antigens," and the use of such respiratory system antigens for detecting disorders of the respiratory system, particularly the presence of cancer of respiratory system tissues and cancer metastases. More specifically, isolated respiratory system associated nucleic acid molecules are provided encoding novel respiratory system associated polypeptides. Novel respiratory system polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human respiratory system associated polynucleotides and/or polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to the respiratory system, including cancer of respiratory system tissues, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The present invention further relates to methods and/or compositions for inhibiting the production and function of the polypeptides of the present invention.

```
L21 ANSWER 3 OF 44 USPATFULL
       2002:165193 USPATFULL
ΤI
       Nucleic acids, proteins, and antibodies
IN
       Rosen, Craig A., Laytonsville, MD, UNITED STATES
       Ruben, Steven M., Olney, MD, UNITED STATES
       Barash, Steven C., Rockville, MD, UNITED STATES
PΙ
                                20020704
       US 2002086822
                           A1
ΑI
       US 2001-764886
                           Α1
                                20010117 (9)
PRAI
       US 2000-179065P
                            20000131 (60)
       US 2000-180628P
                            20000204 (60)
       US 2000-214886P
                            20000628 (60)
       US 2000-217487P
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       US 2000-225758P
                            20000814 (60)
                            20000726 (60)
       US 2000-220963P
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       US 2000-217496P
       US 2000-225447P
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       US 2000-216880P
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       US 2000-235834P
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                            20000929 (60)
       US 2000-236369P
       US 2000-224519P
                            20000814 (60)
       US 2000-220964P
                            20000726 (60)
       US 2000-241809P
                            20001020 (60)
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US 2000-249299P
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       US 2000-236327P
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       US 2000-241785P
                           20001020 (60)
       US 2000-244617P
                           20001101 (60)
       US 2000-225268P
                           20000814 (60)
       US 2000-236368P
                           20000929 (60)
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       US 2000-251856P
       US 2000-251868P
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       US 2000-229344P
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       US 2000-234997P
                           20000925 (60)
       US 2000-229343P
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       US 2000-229345P
                           20000901 (60)
       US 2000-229287P
                           20000901 (60)
                           20000905 (60)
       US 2000-229513P
       US 2000-231413P
                           20000908 (60)
       US 2000-229509P
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       US 2000-236367P
                           20000929 (60)
                           20001002 (60)
       US 2000-237039P
                           20001002 (60)
       US 2000-237038P
       US 2000-236370P
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       US 2000-236802P
                           20001002 (60)
       US 2000-237037P
                           20001002 (60)
       US 2000-237040P
                           20001002 (60)
       US 2000-240960P
                           20001020 (60)
       US 2000-239935P
                           20001013 (60)
DT
       Utility
FS
       APPLICATION
       HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
LREP
CLMN
       Number of Claims: 24
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
LN.CNT 20931
AB
       The present invention relates to novel proteins. More specifically,
       isolated nucleic acid molecules are provided encoding novel
       polypeptides. Novel polypeptides and antibodies that bind to
       these polypeptides are provided. Also provided are vectors, host cells,
       and recombinant and synthetic methods for producing human
       polynucleotides and/or polypeptides, and antibodies. The
       invention further relates to diagnostic and therapeutic methods useful
       for diagnosing, treating, preventing and/or prognosing disorders related
       to these novel polypeptides. The invention further relates to screening
       methods for identifying agonists and antagonists of polynucleotides and
       polypeptides of the invention. The present invention further relates to
       methods and/or compositions for inhibiting or enhancing the production
       and function of the polypeptides of the present invention.
L21 ANSWER 4 OF 44 USPATFULL
AN
       2002:165192 USPATFULL
ΤI
       Nucleic acids, proteins, and antibodies
TN
       Rosen, Craig A., Laytonsville, MD, UNITED STATES
       Ruben, Steven M., Olney, MD, UNITED STATES
       Barash, Steven C., Rockville, MD, UNITED STATES
PΙ
       US 2002086821
                          Α1
                               20020704
ΑI
       US 2001-764881
                          A1
                               20010117 (9)
       US 2000-179065P
                           20000131 (60)
PRAI
DT
       Utility
FS
       APPLICATION
LREP
       HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
CLMN
       Number of Claims: 24
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
```

LN.CNT 27531

The present invention relates to novel respiratory system related AB polynucleotides and the polypeptides encoded by these polynucleotides herein collectively known as "respiratory system antigens," and the use of such respiratory system antigens for detecting disorders of the respiratory system, particularly the presence of cancer of respiratory system tissues and cancer metastases. More specifically, isolated respiratory system associated nucleic acid molecules are provided encoding novel respiratory system associated polypeptides. Novel respiratory system polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human respiratory system associated polynucleotides and/or polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to the respiratory system, including cancer of respiratory system tissues, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The present invention further relates to methods and/or compositions for inhibiting the production and function of the polypeptides of the present invention.

L21 ANSWER 5 OF 44 USPATFULL

AN 2002:165191 USPATFULL

TI Nucleic acids, proteins, and antibodies

IN Rosen, Craig A., Laytonsville, MD, UNITED STATES Ruben, Steven M., Olney, MD, UNITED STATES Barash, Steven C., Rockville, MD, UNITED STATES

PI US 2002086820 A1 20020704 AI US 2001-764862 A1 20010117 (9)

PRAI US 2000-179065P 20000131 (60)

DT Utility FS APPLICATION

LREP HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850

CLMN Number of Claims: 24
ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 17727

AΒ The present invention relates to novel respiratory system related polynucleotides and the polypeptides encoded by these polynucleotides herein collectively known as "respiratory system antigens," and the use of such respiratory system antigens for detecting disorders of the respiratory system, particularly the presence of cancer of respiratory system tissues and cancer metastases. More specifically, isolated respiratory system associated nucleic acid molecules are provided encoding novel respiratory system associated polypeptides. Novel respiratory system polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human respiratory system associated polynucleotides and/or polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to the respiratory system, including cancer of respiratory system tissues, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The present invention further relates to methods and/or compositions for inhibiting the production and function of the polypeptides of the present invention.

```
TI
       Nucleic acids, proteins, and antibodies
       Rosen, Craig A., Laytonsville, MD, UNITED STATES
IN
       Ruben, Steven M., Olney, MD, UNITED STATES
       Barash, Steven C., Rockville, MD, UNITED STATES
PΙ
       US 2002086811
                                20020704
                           Α1
       US 2001-764861
                                20010117 (9)
ΑI
                           A1
PRAI
       US 2000-179065P
                            20000131 (60)
                            20000204 (60)
       US 2000-180628P
       US 2000-214886P
                            20000628 (60)
       US 2000-217487P
                            20000711 (60)
       US 2000-225758P
                            20000814 (60)
       US 2000-220963P
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       US 2000-217496P
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       US 2000-236327P
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       US 2000-229509P
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       US 2000-236367P
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       US 2000-237039P
                            20001002 (60)
                            20001002 (60)
       US 2000-237038P
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       US 2000-237037P
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       US 2000-237040P
                            20001002 (60)
       US 2000-240960P
                            20001020 (60)
       US 2000-239935P
                            20001013 (60)
       Utility
DT
FS
       APPLICATION
LREP
       HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
CLMN
       Number of Claims: 24
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
```

LN.CNT 22023

The present invention relates to novel proteins. More specifically, isolated nucleic acid molecules are provided encoding novel polypeptides. Novel polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human polynucleotides and/or polypeptides, and antibodies. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to these novel polypeptides. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The present invention further relates to methods and/or compositions for inhibiting or enhancing the production and function of the polypeptides of the present invention.

```
L21 ANSWER 7 OF 44 USPATFULL
AN
       2002:164735 USPATFULL
TΙ
       Nucleic acids, proteins, and antibodies
IN
       Rosen, Craig A., Laytonsville, MD, UNITED STATES
       Ruben, Steven M., Olney, MD, UNITED STATES
       Barash, Steven C., Rockville, MD, UNITED STATES
PΙ
       US 2002086353
                           A1
                                20020704
ΑI
       US 2001-764856
                           A1
                                20010117 (9)
PRAI
       US 2000-179065P
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                            20000204 (60)
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       US 2000-240960P
                           20001020 (60)
       US 2000-239935P
                           20001013 (60)
DT
       Utility
FS
       APPLICATION
       HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
LREP
       Number of Claims: 24
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
LN.CNT 23314
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       The present invention relates to novel proteins. More specifically,
       isolated nucleic acid molecules are provided encoding novel
       polypeptides. Novel polypeptides and antibodies that bind to
       these polypeptides are provided. Also provided are vectors, host cells,
       and recombinant and synthetic methods for producing human
       polynucleotides and/or polypeptides, and antibodies. The
       invention further relates to diagnostic and therapeutic methods useful
       for diagnosing, treating, preventing and/or prognosing disorders related
       to these novel polypeptides. The invention further relates to screening
       methods for identifying agonists and antagonists of polynucleotides and
       polypeptides of the invention. The present invention further relates to
       methods and/or compositions for inhibiting or enhancing the production
       and function of the polypeptides of the present invention.
L21 ANSWER 8 OF 44 USPATFULL
ΑN
       2002:164712 USPATFULL
ΤI
       Nucleic acids, proteins, and antibodies
TN
       Rosen, Craig A., Laytonsville, MD, UNITED STATES
       Ruben, Steven M., Olney, MD, UNITED STATES
       Barash, Steven C., Rockville, MD, UNITED STATES
ΡI
       US 2002086330
                          Α1
                                20020704
ΑI
       US 2001-764893
                          Α1
                               20010117 (9)
PRAI
       US 2000-179065P
                           20000131 (60)
       US 2000-180628P
                           20000204 (60)
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       US 2000-225758P
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       US 2000-234223P
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20000830 (60)

20000814 (60)

US 2000-228924P

US 2000-224518P

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US 2000-240960P
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US 2000-239935P
                    20001013 (60)
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DΤ Utility

FS APPLICATION

LREP HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850

CLMN Number of Claims: 24 ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 25862

AB

The present invention relates to novel proteins. More specifically, isolated nucleic acid molecules are provided encoding novel polypeptides. Novel polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human polynucleotides and/or polypeptides, and antibodies. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to these novel polypeptides. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The present invention further relates to methods and/or compositions for inhibiting or enhancing the production and function of the polypeptides of the present invention.

The present invention relates to novel proteins. More specifically, isolated nucleic acid molecules are provided encoding novel polypeptides. Novel polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human polynucleotides and/or polypeptides, and antibodies. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to these novel polypeptides. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The present invention further relates to methods and/or compositions for inhibiting or enhancing the production

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and function of the polypeptides of the present invention.
L21 ANSWER 9 OF 44 USPATFULL
       2002:157060 USPATFULL
AN
ΤI
       Nucleic acids, proteins and antibodies
IN
       Rosen, Craig A., Laytonsville, MD, UNITED STATES
       Ruben, Steven M., Olney, MD, UNITED STATES
PΤ
       US 2002081659
                          Α1
                               20020627
ΑI
       US 2001-925297
                               20010810 (9)
                          A1
       Continuation-in-part of Ser. No. WO 2000-US5989, filed on 8 Mar 2000,
RLI
       UNKNOWN
PRAI
       US 1999-124270P
                           19990312 (60)
DT
       Utility
       APPLICATION
LREP
       HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
CLMN
       Number of Claims: 23
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
LN.CNT 20326
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to novel pancreatic related
       polynucleotides, the polypeptides encoded by these polynucleotides
       herein collectively referred to as "pancreatic antigens," and
       antibodies that immunospecifically bind these polypeptides, and
       the use of such pancreatic polynucleotides, antigens, and
       antibodies for detecting, treating, preventing and/or prognosing
       disorders of the pancreas, including, but not limited to, the presence
       of pancreatic cancer and pancreatic cancer metastases. More
       specifically, isolated pancreatic nucleic acid molecules are provided
       encoding novel pancreatic polypeptides. Novel pancreatic polypeptides
       and antibodies that bind to these polypeptides are provided.
       Also provided are vectors, host cells, and recombinant and synthetic
       methods for producing human pancreatic polynucleotides, polypeptides,
       and/or antibodies. The invention further relates to diagnostic
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and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to the pancreas, including

for inhibiting or promoting the production and/or function of the

pancreatic cancer, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The invention further relates to methods and/or compositions

L21 ANSWER 10 OF 44 USPATFULL AN 2002:149114 USPATFULL

TI Nucleic acids, proteins, and antibodies

polypeptides of the invention.

IN Rosen, Craig A., Laytonsville, MD, UNITED STATES Ruben, Steven M., Olney, MD, UNITED STATES Barash, Steven C., Rockville, MD, UNITED STATES

US 2002077270 PΙ Α1 20020620 ΑT US 2001-764848 Α1 20010117 (9) PRAI US 2000-179065P 20000131 (60) US 2000-180628P 20000204 (60) US 2000-214886P 20000628 (60) US 2000-217487P 20000711 (60) US 2000-225758P 20000814 (60) US 2000-220963P 20000726 (60) US 2000-217496P 20000711 (60) US 2000-225447P 20000814 (60)

> US 2000-218290P 20000714 (60) US 2000-225757P 20000814 (60)

> US 2000-226868P 20000822 (60)

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       US 2000-241785P
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       US 2000-229513P
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       US 2000-231413P
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                           20001002 (60)
                           20001020 (60)
       US 2000-240960P
       US 2000-239935P
                           20001013 (60)
       Utility
       APPLICATION
       HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
       Number of Claims: 24
       Exemplary Claim: 1
       No Drawings
LN.CNT 20057
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to novel proteins. More specifically,
       isolated nucleic acid molecules are provided encoding novel
       polypeptides. Novel polypeptides and antibodies that bind to
       these polypeptides are provided. Also provided are vectors, host cells,
       and recombinant and synthetic methods for producing human
       polynucleotides and/or polypeptides, and antibodies. The
       invention further relates to diagnostic and therapeutic methods useful
       for diagnosing, treating, preventing and/or prognosing disorders related
       to these novel polypeptides. The invention further relates to screening
       methods for identifying agonists and antagonists of polynucleotides and
       polypeptides of the invention. The present invention further relates to
       methods and/or compositions for inhibiting or enhancing the production
       and function of the polypeptides of the present invention.
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DT

FS

LREP CLMN

ECL

AB

DRWN

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2002:148255 USPATFULL
ΑN
TI
       Membrane-bound cytokine compositions and methods of modulating an immune
       response using same
IN
       Hoo, William Soo, Carlsbad, CA, UNITED STATES
PΙ
       US 2002076392
                          A1
                               20020620
ΑI
       US 2001-847185
                          A1
                               20010501 (9)
       Continuation of Ser. No. US 1998-201931, filed on 1 Dec 1998, PENDING
RLI
       Continuation of Ser. No. US 1997-902516, filed on 29 Jul 1997, GRANTED,
       Pat. No. US 5891432
DT
       Utility
FS
       APPLICATION
LREP
       CAMPBELL & FLORES LLP, 4370 LA JOLLA VILLAGE DRIVE, 7TH FLOOR, SAN
       DIEGO, CA, 92122
CLMN
       Number of Claims: 46
       Exemplary Claim: 1
ECL
       4 Drawing Page(s)
DRWN
LN.CNT 1978
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       The present invention provides a cellular vaccine having a
       membrane-bound fusion protein that includes a non-antibody
       immunomodulatory molecule operatively fused to a heterologous membrane
       attachment domain. Non-antibody immunomodulatory molecules
       useful in the invention include immunostimulatory and immunosuppressive
       molecules such as cytokines. In one embodiment, the invention provides a
       cellular vaccine having a membrane-bound fusion protein that includes a
       non-antibody immunomodulatory molecule operatively fused to a
       heterologous membrane attachment domain and, additionally, a
       disease-associated antigen or immunogenic epitope thereof.
       Further provided by the invention are methods of modulating an immune
       response against a disease-associated antigen by administering to an
       individual a cellular vaccine having a membrane-bound fusion protein
       that includes a non-antibody immunomodulatory molecule
       operatively fused to a heterologous membrane attachment domain.
L21 ANSWER 12 OF 44 USPATFULL
ΑN
       2002:133211 USPATFULL
TΙ
       Cytokine antagonists
TN
       Debets, Johannes Eduard Maria Antonius, Rhoon, NETHERLANDS
       Abrams, John S., Los Altos, CA, UNITED STATES
       Kastelein, Robert A., Redwood City, CA, UNITED STATES
       O'Garra, Anne, Palo Alto, CA, UNITED STATES
ΡI
       US 2002068060
                          A1
                               20020606
ΑI
       US 2001-834295
                          Α1
                               20010412 (9)
       US 2000-196754P
                           20000412 (60)
PRAI
DT
       Utility
FS
       APPLICATION
LREP
       SCHERING-PLOUGH CORPORATION, PATENT DEPARTMENT (K-6-1, 1990), 2000
       GALLOPING HILL ROAD, KENILWORTH, NJ, 07033-0530
CLMN
       Number of Claims: 21
ECL
       Exemplary Claim: 1
       No Drawings
DRWN
LN.CNT 862
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       Antagonists of a cytokine signaling system have been found which exhibit
       favorable properties. In particular, antibody antagonists
       raised against the receptor are effective in blocking various signaling
       processes.
L21 ANSWER 13 OF 44 USPATFULL
AN
       2002:119538 USPATFULL
TI
       Nucleic acids, proteins, and antibodies
```

Rosen, Craig A., Laytonsville, MD, UNITED STATES

IN

Ruben, Steven M., Olney, MD, UNITED STATES Barash, Steven C., Rockville, MD, UNITED STATES

PI US 2002061521 A1 20020523 AI US 2001-764869 A1 20010117 (9) PRAI US 2000-179065P 20000131 (60)

DT Utility FS APPLICATION

LREP HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850

CLMN Number of Claims: 24 ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 27967

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to novel cardiovascular system related polynucleotides and the polypeptides encoded by these polynucleotides herein collectively known as "cardiovascular system antigens," and the use of such cardiovascular system antigens for detecting disorders of the cardiovascular system, particularly the presence of cancer of cardiovascular system tissues and cancer metastases. More specifically, isolated cardiovascular system associated nucleic acid molecules are provided encoding novel cardiovascular system associated polypeptides. Novel cardiovascular system polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human cardiovascular system associated polynucleotides and/or polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to the cardiovascular system, including cancer of cardiovascular system tissues, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The present invention further relates to methods and/or compositions for inhibiting the production and function of the polypeptides of the present invention.

L21 ANSWER 14 OF 44 USPATFULL

AN 2002:106416 USPATFULL

TI Nucleic acids, proteins and antibodies

IN Rosen, Craig A., Laytonsville, MD, UNITED STATES

Ruben, Steven M., Olney, MD, UNITED STATES

PI US 2002055627 A1 20020509

AI US 2001-925299 A1 20010810 (9)

RLI Continuation of Ser. No. WO 2000-US5883, filed on 8 Mar 2000, UNKNOWN

PRAI US 1999-124270P 19990312 (60)

DT Utility FS APPLICATION

LREP HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850

CLMN Number of Claims: 23 ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 20658

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to novel colorectal cancer related polynucleotides, the polypeptides encoded by these polynucleotides herein collectively referred to as "colorectal cancer antigens," and antibodies that immunospecifically bind these polypeptides, and the use of such colorectal cancer polynucleotides, antigens, and antibodies for detecting, treating, preventing and/or prognosing disorders of the colon and/or rectum, including, but not limited to, the presence of colorectal cancer and colorectal cancer metastases. More specifically, isolated colorectal cancer nucleic acid molecules are provided encoding novel colorectal cancer polypeptides. Novel colorectal

cancer polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human colorectal cancer polynucleotides, polypeptides, and/or antibodies. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to the colon and/or rectum, including colorectal cancer, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The invention further relates to methods and/or compositions for inhibiting or promoting the production and/or function of the polypeptides of the invention.

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L21 ANSWER 15 OF 44 USPATFULL
       2002:99407 USPATFULL
AN
TI
       Nucleic acids, proteins and antibodies
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       Rosen, Craig A., Laytonsville, MD, UNITED STATES
       Ruben, Steven M., Olney, MD, UNITED STATES
PΙ
       US 2002052308
                               20020502
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ΑI
       US 2001-925301
                          Α1
                               20010810 (9)
RLI
       Continuation of Ser. No. WO 2000-US5882, filed on 8 Mar 2000, UNKNOWN
PRAI
       US 1999-124270P
                           19990312 (60)
DT
       Utility
FS
       APPLICATION
       HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
LREP
CLMN
       Number of Claims: 23
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
LN.CNT 30577
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
```

AB This invention relates to newly identified tissue specific cancer associated polynucleotides and the polypeptides encoded by these polynucleotides herein collectively known as "cancer antigens," and to the complete gene sequences associated therewith and to the expression products thereof, as well as the use of such tissue specific cancer antigens for detection, prevention and treatment of tissue specific disorders, particularly the presense of cancer. This invention relates to the cancer antigens as well as vectors, host cells, antibodies directed to cancer antigens and recombinant and synthetic methods for producing the same. Also provided are diagnostic methods for diagnosing and treating, preventing and/or prognosing tissue specific disorders, including cancer, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of cancer antigens of the invention. The present invention further relates to methods and/or compositions for inhibiting the production and/or function of the polypeptides of the present invention.

AN 2002:85190 USPATFULL

TI Nucleic acids, proteins, and antibodies

IN Rosen, Craig A., Laytonsville, MD, UNITED STATES
Rubin, Steven M., Olney, MD, UNITED STATES
Barash, Steven C., Rockville, MD, UNITED STATES

PI US 2002045230 A1 20020418

L21 ANSWER 16 OF 44 USPATFULL

AI US 2001-908711 A1 20010720 (9)

RLI Continuation-in-part of Ser. No. WO 2001-US1360, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. US 2001-764867, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. WO 2001-US1344, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. US 2001-764892, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. WO 2001-US1345, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser.

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       Utility
       APPLICATION
       HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
       Number of Claims: 24
       Exemplary Claim: 1
       No Drawings
LN.CNT 24462
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to novel ovarian related polynucleotides
       and the polypeptides encoded by these polynucleotides herein
       collectively known as "ovarian antigens," and the use of such ovarian
```

antigens for detecting disorders of the ovaries and/or breast,

DT ·

LREP

ECL

AB

DRWN

FS

particularly the presence of ovarian and/or breast cancer and ovarian and/or breast cancer metastases. More specifically, isolated ovarian associated nucleic acid molecules are provided encoding novel ovarian associated polypeptides. Novel ovarian polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human ovarian associated polynucleotides and/or polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to the ovaries and/or breast, including ovarian and/or breast cancer, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The present invention further relates to methods and/or compositions for inhibiting the production and function of the polypeptides of the present invention.

```
L21 ANSWER 17 OF 44 USPATFULL
AN
       2002:84902 USPATFULL
TΙ
       Nucleic acids, proteins and antibodies
IN
       Rosen, Craig A., Laytonsville, MD, UNITED STATES
       Ruben, Steven M., Olney, MD, UNITED STATES
PΙ
       US 2002044941
                          Α1
                               20020418
ΑI
       US 2001-925302
                          Α1
                               20010810 (9)
RLI
       Continuation-in-part of Ser. No. WO 2000-US5918, filed on 8 Mar 2000,
       UNKNOWN
PRAI
       US 1999-124270P
                           19990312 (60)
DT
       Utility
FS
       APPLICATION
LREP
       HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
CLMN
       Number of Claims: 23
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
LN.CNT 21121
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
```

The present invention relates to novel lung cancer related polynucleotides, the polypeptides encoded by these polynucleotides herein collectively referred to as "lung cancer antigens," and antibodies that immunospecifically bind these polypeptides, and the use of such lung cancer polynucleotides, antigens, and antibodies for detecting, treating, preventing and/or prognosing disorders of the lung, including, but not limited to, the presence of lung cancer and lung cancer metastases. More specifically, isolated lung cancer nucleic acid molecules are provided encoding novel lung cancer polypeptides. Novel lung cancer polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human lung cancer polynucleotides, polypeptides, and/or antibodies. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to the lung, including lung cancer, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The invention further relates to methods and/or compositions for inhibiting or promoting the production and/or function of the polypeptides of the invention.

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L21 ANSWER 18 OF 44 USPATFULL AN 2002:78729 USPATFULL
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TI Nucleic acids, proteins, and antibodies
IN Rosen, Craig A., Lavtonsville, MD. UNIT

Rosen, Craig A., Laytonsville, MD, UNITED STATES Ruben, Steven M., Olney, MD, UNITED STATES

```
Barash, Steven C., Rockville, MD, UNITED STATES
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ΑI
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                           A1
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DT
       Utility
FS
       APPLICATION
LREP
       HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
       Number of Claims: 24
CLMN
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
LN.CNT 23133
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       The present invention relates to novel proteins. More specifically,
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isolated nucleic acid molecules are provided encoding novel polypeptides. Novel polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human polynucleotides and/or polypeptides, and antibodies. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to these novel polypeptides. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The present invention further relates to methods and/or compositions for inhibiting or enhancing the production and function of the polypeptides of the present invention.

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ANSWER 19 OF 44 USPATFULL
AN
       2002:78442 USPATFULL
TI
       Nucleic acids, proteins, and antibodies
ΤN
       Rosen, Craig A., Laytonsville, MD, UNITED STATES
       Ruben, Steven M., Olney, MD, UNITED STATES
       Barash, Steven C., Rockville, MD, UNITED STATES
PΙ
       US 2002042096
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       US 2001-764887
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DT
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FS
       APPLICATION
LREP
       HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
       Number of Claims: 24
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
LN.CNT 19583
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       The present invention relates to novel liver related polynucleotides and
       the polypeptides encoded by these polynucleotides herein collectively
       known as "liver antigens," and the use of such liver antigens for
       detecting disorders of the liver, particularly the presence of cancer of
       liver and cancer metastases. More specifically, isolated liver
       associated nucleic acid molecules are provided encoding novel liver
       associated polypeptides. Novel liver polypeptides and antibodies
       that bind to these polypeptides are provided. Also provided are vectors,
       host cells, and recombinant and synthetic methods for producing human
       liver associated polynucleotides and/or polypeptides. The invention
       further relates to diagnostic and therapeutic methods useful for
       diagnosing, treating, preventing and/or prognosing disorders related to
       the liver, including cancer of liver tissues, and therapeutic methods
       for treating such disorders. The invention further relates to screening
       methods for identifying agonists and antagonists of polynucleotides and
       polypeptides of the invention. The present invention further relates to
       methods and/or compositions for inhibiting the production and function
       of the polypeptides of the present invention.
L21 ANSWER 20 OF 44 USPATFULL
ΑN
       2002:72627 USPATFULL
TI
       Nucleic, acids, proteins, and antibodies
IN
       Rosen, Craig A., Laytonsville, MD, UNITED STATES
       Ruben, Steven M., Olney, MD, UNITED STATES
ΡI
       US 2002039764
                          A1
                               20020404
ΑI
       US 2001-925298
                          Α1
                               20010810 (9)
RLI
       Continuation-in-part of Ser. No. WO 2000-US5881, filed on 8 Mar 2000,
       UNKNOWN
PRAI
       US 1999-124270P
                           19990312 (60)
       Utility
DT
FS
       APPLICATION
LREP
       HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
CLMN
       Number of Claims: 23
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
LN.CNT 20087
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       The present invention relates to novel ovarian cancer and/or breast
       cancer related polynucleotides, the polypeptides encoded by these
       polynucleotides herein collectively referred to as "ovarian and/or
       breast antigens," and antibodies that immunospecifically bind
       these polypeptides, and the use of such ovarian and/or breast
       polynucleotides, antigens, and antibodies for detecting,
       treating, preventing and/or prognosing disorders of the reproductive
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system, particularly disorders of the ovaries and/or breast, including,

but not limited to, the presence of ovarian and/or breast cancer and ovarian and/or breast cancer metastases. More specifically, isolated ovarian and/or breast nucleic acid molecules are provided encoding novel ovarian and/or breast polypeptides. Novel ovarian and/or breast polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human ovarian and/or breast polynucleotides, polypeptides, and/or antibodies. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to the ovaries and/or breast, including ovarian and/or breast cancer, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The invention further relates to methods and/or compositions for inhibiting or promoting the production and/or function of the polypeptides of the invention.

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L21 ANSWER 21 OF 44 USPATFULL
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AN 2002:72462 USPATFULL

TI Methods of diagnosing and treating small intestinal bacterial overgrowth (SIBO) and SIBO-related conditions

IN Lin, Henry C., Manhattan Beach, CA, UNITED STATES Pimentel, Mark, Los Angeles, CA, UNITED STATES

PI US 2002039599 A1 20020404

AI US 2001-837797 A1 20010417 (9)

RLI Continuation-in-part of Ser. No. US 1999-374142, filed on 11 Aug 1999, PENDING Continuation-in-part of Ser. No. US 2000-546119, filed on 10 Apr 2000, PENDING Continuation-in-part of Ser. No. US 1999-420046, filed on 18 Oct 1999, PENDING Continuation-in-part of Ser. No. US 1999-359583, filed on 22 Jul 1999, ABANDONED Continuation of Ser. No. US 1997-832307, filed on 3 Apr 1997, GRANTED, Pat. No. US 5977175 Continuation of Ser. No. US 1995-442843, filed on 17 May 1995, ABANDONED

DT Utility

FS APPLICATION

LREP SIDLEY & AUSTIN, 555 West Fifth Street, Los Angeles, CA, 90071-2909

CLMN Number of Claims: 45 ECL Exemplary Claim: 1

DRWN 13 Drawing Page(s)

LN.CNT 4226

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Disclosed is a method of treating small intestinal bacterial overgrowth (SIBO) or a SIBO-caused condition in a human subject. SIBO-caused conditions include irritable bowel syndrome, fibromyalgia, chronic pelvic pain syndrome, chronic fatigue syndrome, depression, impaired mentation, impaired memory, halitosis, tinnitus, sugar craving, autism, attention deficit/hyperactivity disorder, drug sensitivity, an autoimmune disease, and Crohn's disease. Also disclosed are a method of screening for the abnormally likely presence of SIBO in a human subject and a method of detecting SIBO in a human subject. A method of determining the relative severity of SIBO or a SIBO-caused condition in a human subject, in whom small intestinal bacterial overgrowth (SIBO) has been detected, is also disclosed.

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L21 ANSWER 22 OF 44 USPATFULL
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AN 2002:67349 USPATFULL

TI Coupling of peripheral tolerance to endogenous IL-10 promotes effective modulation of T cells and ameliorates autoimmune disease

IN Zaghouani, Habib, Columbia, MO, UNITED STATES

PI US 2002038002 A1 20020328

AI US 2001-873901 A1 20010604 (9) PRAI US 2000-209527P 20000605 (60) DTUtility APPLICATION FS LREP KNOBBE MARTENS OLSON & BEAR LLP, 620 NEWPORT CENTER DRIVE, SIXTEENTH FLOOR, NEWPORT BEACH, CA, 92660 CLMN Number of Claims: 65 Exemplary Claim: 1 ECL45 Drawing Page(s) DRWN LN.CNT 4140 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AΒ Immunomodulating agents comprising at least one Fc receptor ligand and at least one immunosuppressive factor are provided as are methods for their manufacture and use. The immunomodulating agents may be in the form of polypeptides or chimeric antibodies and preferably incorporate an immunosuppressive factor comprising a T cell receptor agonist or antagonist. The compounds and compositions of the invention may be used to selectively suppress the immune system to treat symptoms associated with immune disorders such as allergies, transplanted tissue rejection and autoimmune disorders including autoimmune diabetes, rheumatoid arthritis and multiple sclerosis. L21 ANSWER 23 OF 44 USPATFULL AN2002:48631 USPATFULL THERAPEUTIC COMPOUNDS FOR INHIBITING INTERLEUKIN-12 SIGNALING AND ΤI METHODS FOR USING SAME IN KLEIN, J. PETER, VASHON, WA, UNITED STATES KLAUS, STEPHEN J., SEATTLE, WA, UNITED STATES KUMAR, ANIL M., MERCER ISLAND, WA, UNITED STATES GONG, BAOQING, SHORELINE, WA, UNITED STATES PΙ US 2002028823 A1 20020307 US 1999-288556 ΑI **A**1 19990409 (9) RLI Continuation-in-part of Ser. No. US 1998-8020, filed on 16 Jan 1998, ABANDONED DT Utility APPLICATION FS MCDERMOTT WILL & EMERY, 600 13TH STREET, N.W., WASHINGTON, DC, LREP 20005-3096 CLMN Number of Claims: 20 ECL Exemplary Claim: 1 DRWN 1 Drawing Page(s) LN.CNT 4381 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AB Novel heterocyclic compounds having a six membered ring structure fused to a five membered ring structure are found to be useful for the treatment and prevention of symptoms or manifestations associated with disorders affected by Interleukin-12 ("IL-12") intracellular signaling, such as, for example, Th1 cell-mediated disorders. The therapeutic compounds, pharmaceutically acceptable derivatives (e.g., resolved enantiomers, diastereomers, tautomers, salts and solvates thereof) or prodrugs thereof, have the following general formula: ##STR1## Each X, Y and Z are independently selected from a member of the group consisting of C(R.sub.3), N, N(R.sub.3) and S. Each R.sub.1, R.sub.2 and R.sub.3 is substituted or unsubstituted and is independently selected from a member of the group consisting of hydrogen, halo, oxo, C.sub.(1-20)alkyl, C.sub.(1-20)hydroxyalkyl, C.sub.(1-20)thioalkyl, C.sub. (1-20) alkylamino, C.sub. (1-20) alkylamino alkyl, C.sub.(1-20)aminoalkyl, C.sub.(1-20)aminoalkoxyalkenyl, C.sub. (1-20) aminoalkoxyalkynyl, C.sub. (1-20) diaminoalkyl, C.sub.(1-20)triaminoalkyl, C.sub.(1-20)tetraaminoalkyl,

C.sub. (5-15) aminotrialkoxyamino, C.sub. (1-20) alkylamido,

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C.sub.(1-20)acetamidoalkyl, C.sub.(1-20)alkenyl, C.sub.(1-20)alkynyl,
       C.sub.(3-8)alkoxyl, C.sub.(1-11)alkoxyalkyl, and C.sub.(1-
       20) dialkoxyalkyl.
L21 ANSWER 24 OF 44 USPATFULL
       2002:42953 USPATFULL
ΑN
       Bispecific monoclonal antibodies to IL-12
TI
       and IL-18
IN
       Leung, Stewart, El Cerrito, CA, UNITED STATES
       Perez, H. Daniel, Kentfield, CA, UNITED STATES
       Miyamoto, Neil, Corte Madera, CA, UNITED STATES
PA
       Schering AG, Berlin, GERMANY, FEDERAL REPUBLIC OF (U.S. corporation)
ΡI
       US 2002025317
                          A1
                               20020228
ΑI
       US 2001-907960
                          Α1
                               20010719 (9)
       US 2000-219448P
PRAI
                           20000720 (60)
DT
       Utility
FS
       APPLICATION
LREP
       MILLEN, WHITE, ZELANO & BRANIGAN, P.C., 2200 CLARENDON BLVD., SUITE
       1400, ARLINGTON, VA, 22201
CLMN
       Number of Claims: 30
ECL
       Exemplary Claim: 1
DRWN
       7 Drawing Page(s)
LN.CNT 1451
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       A bispecific monoclonal antibody is described which comprises
       two moieties, one of which comprises an antigen-binding region which is
       specific for either the IL-12R.beta.1 or the IL-12R.beta.2 subunit of an
       IL-12 receptor, and the other of which comprises an
       antigen-binding region which is specific for either the IL-18R or the
       AcPL subunit of an IL-18 receptor.
L21 ANSWER 25 OF 44 WPIDS (C) 2002 THOMSON DERWENT
                                                       DUPLICATE 2
AN
     2001-244697 [25]
                        WPIDS
DNC C2001-073427
     Modulating responsiveness to a corticosteroid by administering a
     corticosteroid with an agent which antagonizes a target that regulates
     interferon-gamma production or an caspase family protease inhibitor,
     useful for treating asthma.
DC
     B04 B05 D16
ΙN
     BANERJEE, S; CARTER, A; GHAYUR, T; SEKUT, L; TRACEY, D E
PΑ
     (BADI) BASF AG
CYC 94
PΙ
     WO 2001019373 A2 20010322 (200125) * EN 152p
        RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
            NL OA PT SD SE SL SZ TZ UG ZW
         W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM
            DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
            LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE
            SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
     AU 2000071276 A 20010417 (200140)
ADT WO 2001019373 A2 WO 2000-US24725 20000908; AU 2000071276 A AU 2000-71276
     20000908
FDT AU 2000071276 A Based on WO 200119373
PRAI US 1999-398555
                     19990917
    WO 200119373 A UPAB: 20010508
     NOVELTY - A new method (M1) for modulating responsiveness to a
     corticosteroid in a subject comprises administering a corticosteroid with
     an agent (A1) which antagonizes a target that regulates production of
     interferon-gamma (IFN-gamma) or at least one agent (A2) that is an
     inhibitor of a caspase family protease.
          DETAILED DESCRIPTION - A method (M1) for modulating responsiveness to
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C.sub.(1-20)alkylamidoalkyl, C.sub.(1-20)amidoalkyl,

a corticosteroid in a subject, comprising selecting a subject in need of modulation of responsiveness to a corticosteroid and administering:

- (a) an agent (A1) which antagonizes a target that regulates production of interferon-gamma (IFN-gamma) in the subject, the agent being administered at a dosage and by a route sufficient to inhibit production of IFN-gamma; or
- (b) at least one agent (A2) that is an inhibitor of a caspase family protease; and
 - (c) a corticosteroid.

The responsiveness of the subject to the corticosteroid is modulated as compared to when a corticosteroid alone is administered to the subject.

An INDEPENDENT CLAIM is also given for a method (M2) for regulating the production of IFN-gamma in a subject, comprising administering a corticosteroid and an agent which antagonizes a target that regulates production of IFN-gamma such that production of IFN-gamma is modulated in the subject.

ACTIVITY - Immunosuppressive; antiinflammatory; dermatological; antibacterial; cytostatic; antiasthmatic; anticonvulsant; antidiabetic; antiarthritic; antirheumatic; neuroprotective; antiallergic; antiulcer; ophthalmological; antianemic.

Interleukin converting enzyme (ICE)-deficient and wild type mice first were sensitized with Propionibacterium acnes cell wall material (1 mg per mouse) to induce low grade inflammation and six days later were challenged with lipopolysaccharide (LPS) (1 microgram per mouse in 0.1 ml of saline intravenously). Thirty minutes after LPS administration, the mice were treated with the corticosteroid dexamethasone (4 mg/kg per mouse in 0.5 ml 95% saline/0.5% ethanol, intraperitoneally). Control mice were treated with vehicle alone. All mice were bled 90 minutes after LPS administration and the serum samples were analyzed for the presence of tumor necrosis alpha (TNF-alpha) by standard ELISA (Enzyme linked immunosorbant assay).

Wild type and ICE deficient mice treated with vehicle alone had similar levels of serum TNF-alpha. Treatment of wild type mice with dexamethasone did not significantly affect serum TNF-alpha levels, demonstrating their resistance to steroid treatment in this septic shock model. In contrast, treatment of the ICE deficient mice with dexamethasone suppressed serum TNF-alpha levels by 74% (p less than 0.002). These data indicate that inhibition of ICE activity reverses resistance to steroid treatment in a septic shock model.

MECHANISM OF ACTION - IL-12 antagonist; IL-18 antagonist; phosphodiesterase IV inhibitor; a beta-2 agonist; a STAT4 inhibitor; an anti-IL-1-alpha antibody; an anti-IL-1-beta antibody; an anti-tumor necrosis factor antibody; a natural killer cell antagonist; a T-cell antagonist; caspase family protease inhibitor; gene therapy.

USE - The method is useful for treating a subject suffering from an autoimmune disease or disorder, an acute (e.g. infectious meningitis) or chronic (e.g. systemic lupus erythematosus or psoriasis) inflammatory disorder, septic shock or sepsis, graft versus host disease or transplant rejection, complications associated with post-surgical stress, Still's disease, leukemia or an immuno-inflammatory disease or disorder. The immuno-inflammatory disease or disorder is asthma, adult respiratory distress syndrome, systemic lupus erythematosus, inflammatory bowel disease, Crohn's disease, ulcerative colitis, multiple sclerosis, insulin-dependent diabetes mellitus, autoimmune arthritis,

rheumatoid arthritis, juvenile rheumatoid arthritis, psoriatic arthritis, inflammatory pulmonary syndrome, pemphigus vulgaris, idiopathic thrombocytopenic purpura, autoimmune meningitis, myasthenia gravis, autoimmune thyroiditis, dermatitis, atopic dermatitis, eczematous dermatitis, psoriasis, Sjogren's Syndrome, keratoconjunctivitis sicca secondary to Sjogren's Syndrome, alopecia areata, allergic responses due to arthropod bite reactions, aphthous

ulcer, iritis, conjunctivitis, keratoconjunctivitis, cutaneous lupus erythematosus, scleroderma, vaginitis, proctitis, drug eruptions, Stevens-Johnson syndrome, leprosy reversal reactions, erythema nodosum leprosum, autoimmune uveitis, allergic encephalomyelitis, aplastic anemia, pure red cell anemia, idiopathic thrombocytopenia, polychondritis, Wegener's granulomatosis, chronic active hepatitis, Graves ophthalmopathy, primary biliary cirrhosis, uveitis posterior or interstitial lung fibrosis (claimed).

The method is useful for modulating corticosteroid responsiveness in a variety of clinical settings, for e.g. reversing steroid resistance, increasing steroid sensitivity, ameliorating a steroid rebound effect associated with administration of reduced dosages of the corticosteroid, or modulating corticosteroid activity, such that the corticosteroids can be tapered to zero (claimed).

Dwg.0/12

L21 ANSWER 26 OF 44 WPIDS (C) 2002 THOMSON DERWENT AN 2002-075345 [10] WPIDS DNC C2002-022528 ΤI Use of apoptotic bodies and/or apoptotic cells for treatment and prophylaxis of T cell-mediated and inflammatory disorders such as psoriasis, atherosclerosis, diabetes and scleroderma in mammalian patients. DC B04 D16 IN BOLTON, A E; MANDEL, A; SAUDER, D PA (VASO-N) VASOGEN IRELAND LTD; (BOLT-I) BOLTON A E; (MAND-I) MANDEL A; (SAUD-I) SAUDER D CYC 94 PΙ WO 2001089536 A2 20011129 (200210) * EN 20p RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW CA 2309518 A1 20011125 (200210) AU 2001061986 A 20011203 (200221) US 2002051771 A1 20020502 (200234) ADT WO 2001089536 A2 WO 2001-CA758 20010525; CA 2309518 A1 CA 2000-2309518 20000525; AU 2001061986 A AU 2001-61986 20010525; US 2002051771 A1 US 2001-866488 20010525 FDT AU 2001061986 A Based on WO 200189536 PRAI CA 2000-2309518 20000525

NOVELTY - Use of apoptotic bodies and/or apoptotic cells for treatment and prophylaxis of T cell-mediated and inflammatory disorders, or in the preparation of a medicament for treatment and/or prophylaxis of T cell-mediated and inflammatory disorders in mammalian patients.

WO 200189536 A UPAB: 20020213

ACTIVITY - Antipsoriatic; antirheumatic; antiarthritic; immunosuppressive; neuroprotective; antiallergic; dermatological; antiinflammatory; antidiabetic; antiatherosclerotic; antiasthmatic; antimicrobial. The effectiveness of treatment on contact hypersensitivity (CHS), an example of a Th-1-cell inflammatory disorder was assessed on laboratory mice. To induce CHS, the abdominal skin of each mouse was painted with dinitrodifluorobenzene (DNFB). Apoptotic bodies were prepared from murine fibroblasts. The murine fibroblasts were treated with 50 nM sodium butyrate in RPMI (not defined) medium, at confluency for one day, and then the sodium butyrate medium was changed. To increase the number of apoptotic cells and bodies, the cells were additionally irradiated with ultra-violet (UV)-light. Supernatant containing floating cells was removed 24 hours following irradiation. Apoptotic bodies were quantitated. The pellet containing the apoptotic bodies was resuspended in phosphate

buffered saline (PBS). The cells to be stained for quantitation were resuspended in 1X binding buffer at a concentration of 1 multiply 106 cells/ml. Of the two groups of sensitized mice, the first, control group, received no treatment. The second, test group, was treated with an injection of suspended apoptotic bodies, 50 micro l volume containing at least 150000 bodies per injection of blood subjected to stressors. Treatments each involving intramuscular injection of 50 micro 1 of the respective liquid, started on the day of sensitization, and were repeated every day for a total of six days. On the same day as the last treatment, but after its administration, the animals were challenged with DNFB, by applying to the right ear to each animal 10 micro 1 of 0.2 % solution of DNFB in acetone and olive oil. To the left ear of each animal was applied the acetone/olive oil solvent without DNFB. Ear thickness was measured, 24 hours after challenge. The results were expressed as the thickness and difference in thickness of the right ears and the left ears of each animal, at 24 hours after challenge. The results showed a notable and significant reduction in ear thickness (inflammation) with the animals treated with the apoptotic cells and apoptotic bodies suspension, as compared with the untreated group, demonstrating a significant reduction in inflammation.

MECHANISM OF ACTION - Interleukin-10 (IL-10) agonist; tumor necrosis factor- gamma (TNF- gamma), IL-6 and ${\tt IL-12}$ antagonist; vaccine.

USE - The method is useful for treatment and/or prophylaxis of T cell-mediated and inflammatory disorders such as psoriasis, rheumatoid arthritis, scleroderma, lupus, diabetes mellitus, organ rejection, miscarriage, multiple sclerosis, inflammatory bowel disease, atherosclerosis and graft versus host disease in mammalian patients (claimed), and also microbial infections, asthma, contact hypersensitivity and other inflammatory allergic reactions. The method is also applicable to preconditioning against ingestions of poisons (poison ivy or poison oak reaction), exposure to toxic chemicals, radiation damage and exposure to air borne and water borne irritant substances, which cause damaging inflammation. In addition, it is applicable to inflammatory, allergic and T cell-mediated disorders of internal organs, such as kidney, liver, heart, etc.

- L21 ANSWER 27 OF 44 WPIDS (C) 2002 THOMSON DERWENT
- AN 2001-244560 [25] WPIDS
- DNC C2001-073385
- TI Composition comprising interleukin-12 p40 and IL-B30 polypeptide or its segment, useful for ameliorating rheumatoid arthritis, osteoarthritis, atherosclerosis, multiple sclerosis, vasculitis and tumor. DC B04 D16
- IN DE WAAL MALEFYT, R; KASTELEIN, R A; LIRA, S A; NARULA, S K; OPPMANN, B; RENNICK, D M; WIEKOWSKI, M T
- PA (SCHE) SCHERING CORP
- CYC 92
- PI WO 2001018051 A2 20010315 (200125)* EN 69p
 - RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
 - W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CZ DE DK DM DZ EE ES FI GB GD GE HR HU ID IL IN IS JP KG KR KZ LC LK LR LT LU LV MA MD MG MK MN MX MZ NO NZ PL PT RO RU SE SG SI SK SL TJ TM TR TT TZ UA UZ VN YU ZA
 - AU 2000073608 A 20010410 (200137)
 - EP 1210434 A2 20020605 (200238) EN
 - R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
- ADT WO 2001018051 A2 WO 2000-US24686 20000908; AU 2000073608 A AU 2000-73608 20000908; EP 1210434 A2 EP 2000-961688 20000908, WO 2000-US24686 20000908

FDT AU 2000073608 A Based on WO 200118051; EP 1210434 A2 Based on WO 200118051 PRAI US 1999-164616P 19991110; US 1999-393090 19990909
AB WO 200118051 A UPAB: 20010508

NOVELTY - A composition (I) comprising a substantially pure polypeptide comprising a number of distinct segments of at least 7 contiguous amino acids from interleukin (IL)-12 p40 and/or IL-B30, and a substantially pure polypeptide comprising a segment of at least 11 contiguous amino acids from IL-12 p40 and/or IL-B30.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) an isolated or recombinant nucleic acid (II) encoding (I);
- (2) a cell (III) comprising (II);
- (3) a nucleic acid (IV) which hybridizes under wash conditions of 30 minutes at 50 deg. C and less than 1M salt to the natural mature coding portion of primate IL-12 p40 and IL-B30;
- (4) an antagonist (V) of IL-12 p40/IL-B30 combined with a tumor necrosis factor-alpha (TNF alpha) antagonist, an IL-12 antagonist, IL-10, or steroids;
- (5) a binding compound (VI) comprising an antigen binding site from an **antibody**, which specifically binds to (I) and comprising a substantially pure polypeptide comprising **IL-12** p40 and IL-B30 polypeptide, or a polypeptide comprising **IL-12** p40 fused to IL-B30, but not to either **IL-12** p40 or IL-B30 polypeptide;
 - (6) a kit (VII) comprising:
- (a) (I), and a compartment comprising the polypeptide, or instructions for use or disposal of reagents in the kit;
- (b) (II), and a compartment comprising (II), a compartment further comprising a primate ${\bf IL}{-}{\bf 12}$ p40 or IL-B30, or instructions for use or disposal of reagents in the kit or (VI); and
- (c) a compartment comprising (VI), or instructions for use or disposal of reagents in the kit;
- (7) producing (M1) an antigen:antibody complex, involves contacting, under appropriate conditions, a primate IL12 p40/IL-B30 composition with (VI), allowing the complex to form;
- (8) a composition (VIII) comprising (VI) which is sterile, or (VI) and a carrier such as an aqueous compound, including water, saline, and/or buffer;
- (9) increasing (M2) the secretion of a primate IL-B30 involves expressing the polypeptide with **IL-12** p40 or increasing the secretion of a primate **IL-12** p40 involves expressing the **IL-12** p40 with IL-B30; and
- (10) screening (M3) for a receptor which binds (I) involves contacting the complex to a cell expressing the receptor under conditions allowing the complex to bind to the receptor, forming a detectable interaction.

ACTIVITY - Antirheumatic; antiarthritic; osteopathic; antiarthritic; neuroprotective; antiarteriosclerotic; cerebroprotective; vasotropic; cytostatic; antitumor; immunosuppressive.

MECHANISM OF ACTION - Modulator of physiology or development of cell in host; inducer of memory T-cell proliferation (claimed); modulator of trafficking or activation of leukocyte.

No supporting data is given.

USE - (I) is useful for modulating physiology or development of a cell or tissue in a host organism by contacting the cell with (I) or (V), resulting in an increased or decreased production of Interferon-gamma (IFN gamma), an enhanced Th1 response such as anti-tumor effect, adjuvant effect, anti-viral effect or antagonized allergic effect, and amelioration of an autoimmune condition or a chronic inflammatory condition. The contacting is in combination with IL-18, IL-12, radiation therapy or chemotherapy, an immune adjuvant or an anti-viral

therapeutic. The antagonist is an antibody against IL-12 receptor subunit beta 1. The antagonist or agonist of mammalian IL-B30 protein is useful for modulating the inflammatory response in an animal, by contacting cells in the animal with the agonist or antagonist, where the animal exhibits signs or symptoms of an acute phase inflammatory response in skin, lung, gastrointestinal, or liver tissue. The modulation is accelerating maturation of neutrophils into platelets and has an effect on immunoglobin A and G (IgA and IgG) . The antagonist is an antibody which binds to the mammalian IL-B30 or blocks signaling mediated by mammalian IL-B30. The antagonist or agonist is administered in combination with an anti-inflammatory cytokine agonist or antagonist, an analgesic, an anti-inflammatory agent, or a steriod. IL-B30 or its agonist is useful inducing the proliferation of memory T-cells (all claimed). Agonist or antagonist of IL-B30 protein is useful for

Agonist or antagonist of IL-B30 protein is useful for modulating the trafficking or activation of a leukocyte in an animal experiencing science or symptoms of autoimmunity, an inflammatory condition, tissue specific autoimmunity, degenerative autoimmunity, rheumatoid arthritis, osteoarthritis, atherosclerosis, multiple sclerosis, vasculitis, delayed hypersensitivities, skin grafting, a transplant, spinal injury, stroke, neurodegeneration, an infectious disease, ischemia, cancer, tumors, multiple myeloma, Castleman's disease, postmenopausal osteoporosis or IL-6-associated diseases.

IL-12 p40/IL-B30 is useful as an immunogen for
the production a antisera or antibodies specific for binding.
(I) is useful for in vitro assays, scientific research, and the synthesis or manufacture of nucleic acids or antibodies. (II) is useful in forensic science.
Dwg.0/0

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L21 ANSWER 28 OF 44 WPIDS (C) 2002 THOMSON DERWENT
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AN 2001-515399 [57] WPIDS

DNC C2001-154207

TI New substituted glutarimide derivatives are IL-12 antagonists, are useful as immunomodulators and for the treatment of angiopathy, hematological or oncological disorders.

DC B03

IN BUSCHMANN, H; FROSCH, S; GERMANN, T; WADE, E; ZIMMER, O

PA (CHEF) GRUENENTHAL GMBH

CYC 94

PI DE 10002509 A1 20010726 (200157) * 8p WO 2001053261 A1 20010726 (200157) DE

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2001025140 A 20010731 (200171)

ADT DE 10002509 A1 DE 2000-10002509 20000121; WO 2001053261 A1 WO 2001-EP155 20010109; AU 2001025140 A AU 2001-25140 20010109

FDT AU 2001025140 A Based on WO 200153261

PRAI DE 2000-10002509 20000121

AB DE 10002509 A UPAB: 20011005

NOVELTY - Substituted glutarimide derivatives (I) are new.

DETAILED DESCRIPTION - Substituted glutarimide derivatives of formula (I) are new.

R1, R2 = COOR5, COR5 or CONR6R7, H, Cl, F, OH, NO2, NH2, 1-6C alkyl, 1-6C alkoxy, CHF2, CH2F, CF3 or an optionally substituted condensed benzol ring;

R5 = 1-6C alkyl or 3-7C cycloalkyl;

R6, R7 = 1-6C alkyl, or R6+R7 together form pyrrolidine, piperidine, hexamethyleneimine, morpholine, thiomorpholine, piperazine or N-methylpiperazine;

R3 = H, OH or CH2NR6R7;

R4 = H, 1-3C alkyl, F, CF3 or CHF2;

X = (CH2)n-NR8, (CH2)n-S, (CH2)q, C equivalent to C-(CH2)m or CH=CH-(CH2)m;

R8 = H, 1-6C alkyl, benzyl or phenylethyl (optionally substituted by C1, F, CHF2, CH2F, CF3, OH, NO2, NH2, 1-6C alkyl or 1-6C alkoxy);

n = 1-3;

q = 2-4; and

m = 1 or 2.

Any available heteroatoms (on X) are bound to the glutarimide moiety and any methylene groups may be substituted by 1-3C alkyl, 1-3C alkoxy, F, Cl, CF3 or OH. Provided that (a) R1 and R2 are not both H and (b) R1 and R2 cannot be OCH3 when X = (CH2)n-S.

ACTIVITY - Immunomodulator; cytostatic; immunosuppressive; antiinflammatory; dermatological; antipsoriatic; antiasthmatic; antiulcer; hepatotropic; nephrotropic; antiallergic; antirheumatic; antiarthritic; neuroprotective; antidiabetic; antibacterial; antiarteriosclerotic; ophthalmological.

No biological data given.

MECHANISM OF ACTION - Interleukin-antagonist-12; HLA-antagonist.

USE - The compounds are useful as IL-12 inhibitors with activity as immunomodulators and for the treatment of angiopathy, and hematological and oncological disorders (claimed). Non-claimed uses include the treatment of autoimmune disease, atopic dermatitis, psoriasis, eczema, bronchitis, pneumonia, bronchial asthma, ARDS, sarcoidosis, silicosis, fibrosis, gastroduodenal ulcers, Crohn's disease, ulcerative colitis, hepatitis, pancreatitis, appendicitis, peritonitis, nephritis, aphthosis, conjunctivitis, keratitis, uveitis, rhinitis, rheumatoid arthritis, HLA-B27 associated diseases, multiple sclerosis, juvenile onset diabetes, lupus erythematosus, sepsis, bacterial meningitis, cachexia, transplant rejection, graft-versus-host reactions, atherosclerosis, macular degeneration and diabetic retinopathy.

ADVANTAGE - Improved activity and stability against hydrolysis. Dwg.0/0

L21 ANSWER 29 OF 44 BIOTECHDS COPYRIGHT 2002 THOMSON DERWENT AND ISI AN 2001-08257 BIOTECHDS

TI Composition containing interleukin-12 p40 and IL-B30 protein or its segment, useful for ameliorating rheumatoid arthritis, osteoarthritis, atherosclerosis, multiple sclerosis, vasculitis and tumor;

vector-mediated gene transfer and expression in host cell,
antibody and antagonist

AU Oppmann B; De Waal Malefyt R; Rennick D M; Kastelein R A; Wiekowski M T; Lira S A; Narula S K

PA Schering-USA

LO Kenilworth, NJ, USA.

PI WO 2001018051 15 Mar 2001

AI WO 2000-US24686 8 Sep 2000

PRAI US 1999-164616 10 Nov 1999; US 1999-393090 9 Sep 1999

DT Patent

LA English

OS WPI: 2001-244560 [25]

AB A composition containing a substantially pure protein containing a number of distinct segments of at least 7 contiguous amino acids from interleukin (IL)-12 p40 and/or IL-B30, and a substantially pure protein containing a segment of at least 11 contiguous

Also claimed are: a recombinant nucleic acid encoding the protein; a cell containing the nucleic acid; a nucleic acid which hybridizes under wash conditions of 30 min at 50 deg and less than 1M salt to the natural mature coding portion of primate IL-12 p40 and IL-B30; an antagonist of IL-12 p40/IL-B30 combined with a tumor necrosis factor-alpha (TNF-alpha) antagonist, an IL-12 antagonist,

IL-10 or steroids; a binding compound containing an antigen binding site from an antibody which specifically binds to the protein; a kit containing the composition, polynucleotide and a binding compound; producing an antigen:antibody complex; a composition containing a binding compound; increasing the secretion of a primate IL-B30; and screening for a receptor which binds the composition. The composition is useful for modulating physiology or development of a cell or tissue0. (69pp)

amino acids from IL-12 p40 and/or IL-B30, is new.

L21 ANSWER 30 OF 44 USPATFULL AN 2001:221075 USPATFULL TIRetinoid antagonists and use thereof IN Bollag, Werner, Basel, Switzerland Klaus, Michael, Weil am Rhein, Germany, Federal Republic of Mohr, Peter, Basel, Switzerland Panina-Bordignon, Paola, Milan, Italy Rosenberger, Michael, Caldwell, NJ, United States Sinigaglia, Francesco, Milan, Italy PΑ Hoffman-La Roche Inc., Nutley, NJ, United States (U.S. corporation) PΙ US 6326397 В1 20011204 US 1999-307009 ΑI 19990507 (9) RLI Continuation-in-part of Ser. No. US 1998-189189, filed on 10 Nov 1998 DT GRANTED EXNAM Primary Examiner: Killos, Paul J. LREP Johnston, George W., Parise, John P. Number of Claims: 16 CLMN ECL Exemplary Claim: 1 DRWN 7 Drawing Figure(s); 5 Drawing Page(s) LN.CNT 1573 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AB The present invention relates to novel retinoid antagonists of the formula I ##STR1##

wherein the dotted bond can be either hydrogenated or form a double bond; and, when the dotted bond forms a double bond, R.sup.1 is lower alkyl and R.sup.2 is hydrogen; and, when the dotted bond is hydrogenated, R.sup.1 and R.sup.2 taken together are methylene to form a cis-substituted cyclopropyl ring; R.sup.3 is hydroxy or lower alkoxy; R.sup.4 is alkyl or alkoxy; and R.sup.5 and R.sup.6 are, independently, a C.sub.4-12 alkyl or a 5-12 cycloalkyl substituent containing from 1-3 rings which are either unsubstituted or substituted with from 1-3 lower alkyl groups, with the carbon atom of R.sup.5 and R.sup.6 being linked to the remainder of the molecule to form a quaternary carbon atom pharmaceutically acceptable salts of carbocylic acids of the formula I; as well as method for the treatment of osteoporosis and preneoplastic and neoplastic diseases, and a method for reducing or abolishing adverse events in subjects receiving retinoid agonist treatment by administering a retinoid antagonist.

```
L21 ANSWER 31 OF 44 USPATFULL
AN 2001:63494 USPATFULL
TI Antibodies against human IL-12
IN Gately, Maurice Kent, Parsippany, NJ, United States
```

```
Presky, David Howard, Glen Ridge, NJ, United States
      Hoffman-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
PA
PΙ
      US 6225117
                          В1
                               20010501
      US 1999-232522
ΑI
                               19990119 (9)
      US 1998-72333P
                           19980123 (60)
PRAI
DT
      Utility
FS
      Granted
EXNAM
      Primary Examiner: Chan, Christina Y.; Assistant Examiner: DiBrino,
      Marianne
      Johnston, George W., Rocha-Tramaloni, Patricia S., Silverman, Robert A.
LREP
CLMN
      Number of Claims: 23
ECL
      Exemplary Claim: 1
DRWN
       7 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 1122
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to novel p75 heterodimer specific
       anti-human IL-12 antibodies that are
       characterized by a higher potency and greater efficacy in neutralizing
      human IL-12 bioactivity than known heterodimer
       specific IL-12 monoclonal antibodies. The
      heterodimer specific antibodies recognize one or more
      epitopes of the human IL-12 p75 heterodimer,
      but do not bind to the p40 subunit alone. The heterodimer specific
      IL-12 antibodies neutralize rhesus monkey
      IL-12 bioactivity with a potency similar to their
      potency for neutralizing human IL-12 bioactivity
      making them useful IL-12 antagonists for
      in vivo studies in the rhesus monkey.
L21 ANSWER 32 OF 44 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
     2001:290669 BIOSIS
AN
DN
     PREV200100290669
    Antigen-specific T cell-mediated gene therapy in collagen-induced
ΤI
     Nakajima, Atsuo; Seroogy, Christine M.; Sandora, Matthew R.; Tarner, Ingo
AU
     H.; Costa, Gina L.; Taylor-Edwards, Cariel; Bachmann, Michael H.; Contag,
     Christopher H.; Fathman, C. Garrison (1)
     (1) Department of Medicine, Division of Immunology and Rheumatology,
CS
     School of Medicine, Stanford University, CCSR Building, Room 2225,
     Stanford, CA, 94305-5111: cfathman@leland.stanford.edu USA
     Journal of Clinical Investigation, (May, 2001) Vol. 107, No. 10, pp.
SO
     1293-1301. print.
     ISSN: 0021-9738.
DT
     Article
LА
     English
SL
     English
AB
     Autoantigen-specific T cells have tissue-specific homing properties,
     suggesting that these cells may be ideal vehicles for the local delivery
     of immunoregulatory molecules. We tested this hypothesis by using type II
     collagen-specific (CII-specific) CD4+ T hybridomas or primary CD4+ T cells
     after gene transfer, as vehicles to deliver an immunoregulatory protein
     for the treatment of collagen-induced arthritis (CIA), a mouse model of
     rheumatoid arthritis (RA). CII-specific T
     cells or hybridomas were transduced using retroviral vectors to
     constitutively express the IL-12 antagonist,
     IL-12 p40. Transfer of engineered CD4+ T cells after
     immunization significantly inhibited the development of CIA, while cells
     transduced with vector control had no effect. The beneficial effect on CIA
     of IL-12 p40-transduced T cells required TCR
     specificity against CII, since transfer of T cells specific for another
     antigen producing equivalent amounts of IL-12 p40 had
```

no effect. In vivo cell detection using bioluminescent labels and RT-PCR showed that transferred CII-reactive T-cell hybridomas accumulated in inflamed joints in mice with CIA. These results indicate that the local delivery of IL-12 p40 by T cells inhibited CIA by suppressing autoimmune responses at the site of inflammation. Modifying antigen-specific T cells by retroviral transduction for local expression of immunoregulatory proteins thus offers a promising strategy for treating RA.

```
L21 ANSWER 33 OF 44 USPATFULL
ΑN
       2000:138395 USPATFULL
ΤI
       Treatment of T-helper cell type 2-mediated immune disease by retinoid
       antagonists
IN
       Bollag, Werner, Basel, Switzerland
       Klaus, Michael, Weil am Rhein, Germany, Federal Republic of
       Panina-Bordignon, Paola, Milan, Italy
       Sinigaglia, Francesco, Milan, Italy
PA
       Hoffmann-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
PΙ
       US 6133309
                               20001017
       US 1998-189189
ΑI
                               19981110 (9)
       EP 1997-119776
PRAI
                           19971112
DT
       Utility
FS
       Granted
EXNAM
       Primary Examiner: Travers, Russell
LREP
       Johnston, George W., Epstein, William H., Parise, John P.
       Number of Claims: 37
CLMN
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
LN.CNT 780
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Retinoids with retinoid receptor antagonistic activity, pharmaceutically
       acceptable salts and pharmaceutically acceptable hydrolyzable esters
       thereof, have been found efficacious in treating T-helper cell type 2
       (Th2)-mediated immune diseases, such as immunoglobulin E (IgE)-mediated
       allergic diseases.
L21 ANSWER 34 OF 44 USPATFULL
AN
       2000:50737 USPATFULL
ΤI
       Methods and compositions for modulating responsiveness to
       corticosteroids
IN
       Sekut, Les, Westborough, MA, United States
       Carter, Adam, Newburyport, MA, United States
       Ghayur, Tariq, Grafton, MA, United States
       Banerjee, Subhashis, Shrewsbury, MA, United States
       Tracey, Daniel E., Harvard, MA, United States
PA
       BASF Aktiengesellschaft, Rheinland Pfalz, Germany, Federal Republic of
       (non-U.S. corporation)
PΙ
       US 6054487
                               20000425
       US 1997-820692
ΑI
                               19970318 (8)
DT
       Utility
FS
       Granted
EXNAM Primary Examiner: Jarvis, William R. A.
       Lahive & Cockfield, LLP
LREP
CLMN
       Number of Claims: 46
       Exemplary Claim: 1
ECL
DRWN
       3 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 2404
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Method for modulating responsiveness to corticosteroids in a subject are
AΒ
       provided. In the method of the invention, an agent which antagonizes a
       factor that regulates production of IFN-.gamma. in the subject is
       administered to the subject in combination with a corticosteroid such
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that responsiveness of the subject to the corticosteroid is modulated as compared to when a corticosteroid alone is administered to the subject. In one embodiment, the agent is an interferon-.gamma. inducing factor (IGIF) antagonist. In another embodiment, the agent is an interleukin-12 (IL-12) antagonist. In a preferred embodiment, the agent is an inhibitor of a caspase family protease, preferably an ICE inhibitor. In another preferred embodiment, the agent is an anti-IL-12 monoclonal antibody. Other preferred agents include phosphodiesterase IV inhibitors and beta-2 agonists. The methods of the invention can be used in the treatment of a variety of inflammatory and immunological diseases and disorders. Pharmaceutical compositions comprising an agent which antagonizes a factor that regulates production of IFN-.gamma. in a subject, a corticosteroid and a pharmaceutically acceptable carrier are also provided. A preferred composition comprises an ICE inhibitor, a corticosteroid and a pharmaceutically acceptable carrier.

```
L21 ANSWER 35 OF 44 CAPLUS COPYRIGHT 2002 ACS
AN
     1999:487326 CAPLUS
DN
     131:129052
TΙ
     Antibodies against human IL-12
ΙN
     Gately, Maurcie Kent; Presky, David Howard
PΑ
     F. Hoffmann-La Roche A.-G., Switz.
SO
     PCT Int. Appl., 47 pp.
     CODEN: PIXXD2
DT
     Patent
LA
     English
FAN.CNT 1
     PATENT NO.
                     KIND DATE
                                           APPLICATION NO.
                                                            DATE
                                           -----
PΙ
     WO 9937682
                     A2 19990729
                                          WO 1999-EP202 19990115
         W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
             DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
             KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW,
             MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR,
             TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,
             FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,
             CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     AU 9925177
                            19990115
                                          AU 1999-25177
                      A1
                                                            19990115
     CA 2318052
                            19990729
                                           CA 1999-2318052 19990115
                      AΑ
     BR 9907743
                                           BR 1999-7743
                            20001017
                      Α
                                                            19990115
     EP 1049717
                                           EP 1999-904780
                            20001108
                      A2
                                                            19990115
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI
     JP 2002501085
                      T2
                            20020115
                                           JP 2000-528602
                                                            19990115
     US 6225117
                       В1
                            20010501
                                           US 1999-232522
                                                            19990119
     ZA 9900452
                      Α
                            19990723
                                           ZA 1999-452
                                                            19990121
PRAI US 1998-72333P
                      Ρ
                            19980123
     WO 1999-EP202
                      W
                            19990115
AB
     The present invention relates to p75 heterodimer specific anti-human
     IL-12 antibodies that are characterized by a
     higher potency and greater efficacy in neutralizing human IL-
     12 bioactivity than known heterodimer specific IL-
     12 monoclonal antibodies. The heterodimer specific
     antibodies recognize one or more epitopes of the human
     IL-12 p75 heterodimer, but do not bind to the p40
     subunit alone. The heterodimer specific IL-12
     antibodies neutralize rhesus monkey IL-12
     bioactivity with a potency similar to their potency for neutralizing human
     IL-12 bioactivity making them useful IL-
     12 antagonists. The monoclonal antibodies are
     therefore useful for diseases assocd. with aberrant Th1-type helper cell
```

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activity, e.g. multiple sclerosis, rheumatoid arthritis
     , autoimmune diabetes mellitus, Crohn's disease and ulcerative colitis.
L21 ANSWER 36 OF 44 USPATFULL
       1999:43184 USPATFULL
ΑN
TI
       Membrane-bound cytokine compositions comprising GM=CSF and methods of
       modulating an immune response using same
ΤN
       Hoo, William Soo, Carlsbad, CA, United States
PA
       The Immune Response Corporation, Carlsbad, CA, United States (U.S.
       corporation)
       US 5891432
                               19990406
PΙ
ΑI
       US 1997-902516
                               19970729 (8)
DT
       Utility
FS
       Granted
EXNAM Primary Examiner: Spector, Lorraine
LREP
       Campbell & Flores LLP
CLMN
       Number of Claims: 24
ECL
       Exemplary Claim: 1,13
DRWN
       9 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 1917
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       The present invention provides a cellular vaccine having a
       membrane-bound fusion protein that includes a non-antibody
       immunomodulatory molecule such as GM-CSF operatively fused to a
       heterologous membrane attachment domain. Non-antibody
       immunomodulatory molecules useful in the invention include
       immunostimulatory and immunosuppressive molecules such as cytokines. In
       one embodiment, the invention provides a cellular vaccine having a
       membrane-bound fusion protein that includes a non-antibody
       immunomodulatory molecule operatively fused to a heterologous membrane
       attachment domain and, additionally, a disease-associated antigen or
       immunogenic epitope thereof. Further provided by the invention
       are methods of modulating an immune response against a
       disease-associated antigen by administering to an individual a cellular
       vaccine having a membrane-bound fusion protein that includes a non-
       antibody immunomodulatory molecule operatively fused to a
       heterologous membrane attachment domain.
L21 ANSWER 37 OF 44 WPIDS (C) 2002 THOMSON DERWENT
                                                       DUPLICATE 4
     1998-520957 [44]
AN
                        WPIDS
DNC C1998-156445
ΤI
     Modulating responsiveness to corticosteroid e.g. in treating auto-immune
     diseases - by administering agent antagonising target that regulates
     production of interferon gamma.
DC
IN
     BANERJEE, S; CARTER, A; GHAYUR, T; SEKUT, L; TRACEY, D E
PA
     (BADI) BASF AG
CYC
    81
                  A2 19980924 (199844) * EN 112p
PΙ
     WO 9841232
        RW: AT BE CH DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA
            PT SD SE SZ UG ZW
         W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE GH
            GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK
            MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US
            UZ VN YU ZW
    AU 9867604
                  A 19981012 (199907)
    NO 9904506
                   A 19991117 (200005)
    CZ 9903127
                  A3 20000315 (200021)
    EP 998300
                  A1 20000510 (200027)
         R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU NL PT SE
    US 6054487
                 A 20000425 (200027)
                  T1 20000801 (200040)
     ES 2146192
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BR 9810409
           A 20000822 (200050)
CN 1269722
            A 20001011 (200103)
            A3 20001211 (200103)
SK 9901221
           A1 19991201 (200110)
MX 9908433
KR 2000076420 A 20001226 (200134)
AU 734756
             В
                20010621 (200141)
JP 2002504091 W
                20020205 (200212)
                                       154p
HU 2001004439 A2 20020429 (200238)
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ADT WO 9841232 A2 WO 1998-US4916 19980312; AU 9867604 A AU 1998-67604 19980312; NO 9904506 A WO 1998-US4916 19980312, NO 1999-4506 19990917; CZ 9903127 A3 WO 1998-US4916 19980312, CZ 1999-3127 19980312; EP 998300 A1 EP 1998-912929 19980312, WO 1998-US4916 19980312; US 6054487 A US 1997-820692 19970318; ES 2146192 T1 EP 1998-912929 19980312; BR 9810409 A BR 1998-10409 19980312, WO 1998-US4916 19980312; CN 1269722 A CN 1998-805124 19980312; SK 9901221 A3 WO 1998-US4916 19980312, SK 1999-1221 19980312; MX 9908433 A1 MX 1999-8433 19990914; KR 2000076420 A WO 1998-US4916 19980312, KR 1999-708524 19990918; AU 734756 B AU 1998-67604 19980312; JP 2002504091 W JP 1998-540633 19980312, WO 1998-US4916 19980312; HU 2001004439 A2 WO 1998-US4916 19980312, HU 2001-4439 19980312

FDT AU 9867604 A Based on WO 9841232; CZ 9903127 A3 Based on WO 9841232; EP 998300 A1 Based on WO 9841232; ES 2146192 T1 Based on EP 998300; BR 9810409 A Based on WO 9841232; KR 2000076420 A Based on WO 9841232; AU 734756 B Previous Publ. AU 9867604, Based on WO 9841232; JP 2002504091 W Based on WO 9841232; HU 2001004439 A2 Based on WO 9841232

PRAI US 1998-16346 19980130; US 1997-820692 19970318

AB WO 9841232 A UPAB: 19981104

Modulating responsiveness to corticosteroids comprises administering: (a) an agent which antagonises a target that regulates production of interferon- gamma (IFN- gamma), to inhibit production of IFN- gamma and (b) a corticosteroid.

Preferably, the agent which antagonises a target that regulates production of IFN- gamma is an IL-18 antagonist e.g. an inhibitor of a caspase family protease (especially an ICE inhibitor) or an antibody (fragment) or engineered binding protein that binds IL-18 or an IL-18 receptor. The agent may also be an IL-12 antagonist e.g. an agent that stimulates cyclic AMP production in cells that produce IL-12, especially a phosphodiesterase IV inhibitor such as a 4-arylpyrrolidinone, rolipram, denbufylline, tibenelast, nitraquazone, CP-80633, CP-77059 or a quinazolinedione or a beta -2 agonist such as salmeterol, fenoterol or isoproterenol.

USE- The process is used for treating septic shock, Crohn's disease,

asthma, graft versus host disease or transplant rejection autoimmune disease or disorder and immunoinflammatory diseases or disorders comprising adult respiratory distress syndrome, systemic lupus erythematosus, inflammatory bowel disease, ulcerative colitis, multiple sclerosis, insulin dependent diabetes mellitus, rheumatoid arthritis, juvenile rheumatoid arthritis, psoriatic arthritis, inflammatory pulmonary syndrome, pemphigus vulgaris, idiopathic thrombocytopenic purpura, autoimmune meningitis, myasthenia gravis, autoimmune thyroiditis, dermatitis, atopic dermatitis, eczematous dermatitis, psoriasis, Sjogren's syndrome, keratoconjunctivitis, cutaneous lupus erythematosus, scleroderma, vaginitis, proctitis, drug eruptions, Stevens-Johnson syndrome, leprosy reversal reactions, erythema nodosum leprosum, autoimmune uveitis, allergic encephalomyelitis, aplastic anaemia, pure red cell anaemia, idiopathic thrombocytopenia, polychondritis, Wegener's granulomatosis, chronic active hepatitis, Graves ophthalmopathy, primary biliary cirrhosis, uveitis posterior and interstitial lung fibrosis. Administration is oral, intravenous or ophthalmic.

ADVANTAGE - The process reverses steroid resistance and increases steroid sensitivity.

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AΒ
       The present invention relates to a novel antibody against the
       IL-12 receptor and a novel combination of anibodies
       anainst the IL-12 receptor. The novel anti-
       IL-12 receptor anbody, designated as 2B10, provided in
       accordance with the present invention binds to the human IL-
       12 receptor but which is not capable of inhibiting the binding
       of human IL-12 to the high affinity human IL
       -12 receptor and is not capable of neutralizing human
       IL-12 bioactivity by binding to human IL-
       12 receptor.
L21 ANSWER 40 OF 44 USPATFULL
ΑN
       1998:135151 USPATFULL
TΙ
       Human receptor for interleukin-12
ΙN
       Chua, Anne On, Wayne, NJ, United States
       Gubler, Ulrich Andreas, Glen Ridge, NJ, United States
PΑ
       Hoffmann-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
PΙ
       US 5831007
                               19981103
ΑI
       US 1995-419652
                               19950411 (8)
RLI
       Division of Ser. No. US 1994-248532, filed on 31 May 1994, now patented,
       Pat. No. US 5536657 which is a continuation-in-part of Ser. No. US
       1993-94713, filed on 19 Jul 1993, now abandoned
DT
       Utility
FS
       Granted
EXNAM Primary Examiner: Ulm, John
LREP
       Johnston, George W., Epstein, William H., Bucholz, Briana C.
CLMN
       Number of Claims: 10
ECL
       Exemplary Claim: 1
DRWN
       35 Drawing Figure(s); 26 Drawing Page(s)
LN.CNT 1937
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       This invention relates to substantially pure Interleukin-12 receptor
       cDNAs and protein and uses therefore. The Interleukin-12 receptor is
       shown to be a member of the cytokine receptor superfamily and has a high
       homology to human gp130.
L21 ANSWER 41 OF 44 WPIDS (C) 2002 THOMSON DERWENT
AN
     1997-147515 [14]
                        WPIDS
DNN N1997-122015
                        DNC C1997-047130
     New interleukin-12 beta-2 receptor and high binding affinity complexes -
ΤI
     have a high affinity for interleukin-12, and are used to treat auto immune
     diseases.
DC
     B04 D16 S03
     GUBLER, U A; PRESKY, D H
IN
PΑ
     (HOFF) HOFFMANN LA ROCHE & CO AG F; (HOFF) HOFFMANN LA ROCHE INC
CYC 20
PΙ
     EP 759466
                  A2 19970226 (199714) * EN
                                              53p
         R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
     JP 09132598 A 19970520 (199730)
                                              43p
     EP 759466
                  A3 19970528 (199732)
     US 5840530
                  A 19981124 (199903)
     US 5852176
                  A 19981222 (199907)#
     US 5919903
                  A 19990706 (199933)
     JP 2948150
                  B2 19990913 (199943)
                                              43p
ADT EP 759466 A2 EP 1996-111807 19960723; JP 09132598 A JP 1996-196385
     19960725; EP 759466 A3 EP 1996-111807 19960723; US 5840530 A Provisional
     US 1995-1701P 19950801, Provisional US 1996-18674P 19960530, US
     1996-685118 19960723; US 5852176 A Div ex US 1996-685118 19960723, US
     1997-915495 19970820; US 5919903 A Provisional US 1995-1701P 19950801,
     Provisional US 1996-18674P 19960530, Div ex US 1996-685118 19960723, US
     1997-914520 19970819; JP 2948150 B2 JP 1996-196385 19960725
FDT JP 2948150 B2 Previous Publ. JP 09132598
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PRAI US 1996-18674P
                      19960530; US 1995-1701P
                                                 19950801; US 1996-685118
     19960723; US 1997-915495
                                19970820; US 1997-914520
                                                           19970819
AΒ
           759466 A UPAB: 19970407
    A novel low binding affinity (BA) interleukin-12 (IL-12
     ) beta 2 receptor protein (A), or a fragment, has a low BA for
     IL-12, and when complexed with an IL-
     12 beta 1 receptor protein (B), forms a complex having a high BA
     for IL-12. Also new are: (1) a complex with a high BA
     for IL-12, comprising (A) or a fragment,
     complexed with IL-12 beta 1 receptor protein, or a
     fragment, which has a low BA for IL-12, and,
     when complexed with (A), has a high BA for IL-12; (2)
     a protein encoded by first and second nucleic acids, the first comprising
     two subsequences (SS), where one SS encodes a soluble fragment
     of (A), and the other SS (SS2) encodes all the domains of the constant
     region of the heavy chain of human Ig, except the first domain of the
     constant region, and the second nucleic acid has two SS, where one SS
     encodes a soluble fragment of (B) and the other SS is as for
     SS2; (3) nucleic acids encoding the proteins or complexes; (4) vectors
     contg. the nucleic acid of (3); (5) host cells transformed with the
     nucleic acid of (3); and (6) antibodies against (A) or (B).
          USE - The proteins, complexes or antibodies may be used in
     therapeutic compsns., pref. with at least 1 cytokine antagonists
     (claimed). The compsns. are used to treat autoimmune dysfunctions
     (claimed), such as rheumatoid arthritis, inflammatory
     bowel disease and multiple sclerosis. The proteins or complexes can also
    be used to detect antagonists and agonists of IL-
    12 activity (claimed).
    Dwg.0/6
L21 ANSWER 42 OF 44 USPATFULL
AN
       96:63048 USPATFULL
TI
       Recombinant DNA encoding human receptor for interleukin-12
IN
       Chua, Anne O., Wayne, NJ, United States
       Gubler, Ulrich A., Glen Ridge, NJ, United States
       Hoffmann-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
PΑ
PΙ
       US 5536657
                               19960716
       US 1994-248532
ΑI
                               19940531 (8)
       Continuation-in-part of Ser. No. US 1993-94713, filed on 19 Jul 1993,
RLI
       now abandoned
DT
       Utility
FS
       Granted
      Primary Examiner: Ulm, John
EXNAM
       Gould, George M., Johnston, George W., Kass, Alan P.
LREP
CLMN
       Number of Claims: 10
ECL
       Exemplary Claim: 1
DRWN
       34 Drawing Figure(s); 25 Drawing Page(s)
LN.CNT 1755
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       This invention relates to substantially pure Interleukin-12 receptor
AB
       cDNAs and protein and uses therefore. The Interleukin-12 receptor is
       shown to be a member of the cytokine receptor superfamily and has a high
       homology to human gp130.
    ANSWER 43 OF 44 CAPLUS COPYRIGHT 2002 ACS
AN
     1995:934127 CAPLUS
    123:337469
DN
ΤI
    Use of IL-12 and IL-12.
     antagonists in treatment of autoimmune diseases
    Leonard, John P.; Goldman, Samuel; O'Hara, Richard, Jr.
ΙN
     Genetics Institute, Inc., USA
PA
    PCT Int. Appl., 37 pp.
SO
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CODEN: PIXXD2 Patent DΤ LΑ English FAN.CNT 1 PATENT NO. KIND DATE APPLICATION NO. DATE _____ PΙ WO 9524918 A1 19950921 WO 1995-US2550 19950307 W: AU, CA, JP RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE ZA 9500960 19951010 Α ZA 1995-960 19950207 TW 400233 В 20000801 TW 1995-84101380 19950214 IL 112677 **A**1 20000131 IL 1995-112677 19950216 CA 2185565 AA 19950921 CA 1995-2185565 19950307 AU 9519749 **A**1 19951003 AU 1995-19749 19950307 AU 689236 B2 19980326 EP 750509 A1 19970102 EP 1995-912666 19950307 EP 750509 В1 20020515 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE JP 09510444 T2 JP 1995-524044 19971021 19950307 EP 1179348 EP 2001-117762 A2 20020213 19950307 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE US 6338848 В1 20020115 US 2000-513380 20000225 PRAI US 1994-212629 Α 19940314 EP 1995-912666 Α3 19950307 WO 1995-US2550 W 19950307 US 1995-560943 В1 19951120 AB Autoimmune conditions such as multiple sclerosis, systemic lupus erythematosus, rheumatoid arthritis, autoimmune pulmonary inflammation, Guillain-Barre syndrome, autoimmune thyroiditis, insulin-dependent diabetes mellitus, and autoimmune inflammatory eye disease, esp. conditions which are promoted by an increase in levels of IFN-.gamma. or TNF-.alpha., are treated in mammals by administering IL-12 or an IL-12 antagonist Thus, lymphocytes from mice immunized with myelin proteolipid protein, and restimulated with a synthetic peptide from this protein, were injected into naive mice. The injected mice developed exptl. allergic encephalomyelitis which was exacerbated by incubation of these lymphocytes with IL-12 during restimulation, and alleviated by injection of a polyclonal antibody to IL-12. L21 ANSWER 44 OF 44 MEDLINE AN94032770 MEDLINE DN 94032770 PubMed ID: 8218599 Clinical and preclinical studies presented at the Keystone Symposium on Arthritis, Related Diseases, and Cytokines. ΑU Ralph P CS Department of Immunology, Genentech, Inc., South San Francisco, CA 94080. SO LYMPHOKINE AND CYTOKINE RESEARCH, (1993 Aug) 12 (4) 261-3. Journal code: 9107882. ISSN: 1056-5477. United States CY DTConference; Conference Article; (CONGRESSES) LА English FS Priority Journals EM199312 ED Entered STN: 19940117 Last Updated on STN: 19990129 Entered Medline: 19931203 AB Topics include treatment of multiple sclerosis (MS) with T cell receptor (TCR) peptides, rheumatoid arthritis (RA)

with IL-1ra, IL-2 toxin conjugate, or antibodies to TNF, to CD4,

experimental animal diseases with soluble receptors, IL-

or to ICAM-1, sepsis and five other diseases with IL-1ra, and treatment of

12, TGF-beta2, or small molecule antagonists of cytokines.

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=> d clm 1 14
NO VALID FORMATS ENTERED FOR FILE 'BIOSIS'
In a multifile environment, each file must have at least one valid
format requested. Refer to file specific help messages or the
STNGUIDE file for information on formats available in individual
files.
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L21 ANSWER 1 OF 44 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
AN
    2002:166945 BIOSIS
DN
    PREV200200166945
ΤI
    Use of IL-12 and IL-12
     antagonists in the treatment of autoimmune diseases.
ΑU
    Leonard, John (1); Goldman, Samuel; O'Hara, Richard, Jr.
CS
     (1) Auburn, NH USA
    ASSIGNEE: Genetics Institute, Inc.
PI
    US 6338848 January 15, 2002
SO
    Official Gazette of the United States Patent and Trademark Office Patents,
     (Jan. 15, 2002) Vol. 1254, No. 3, pp. No Pagination.
     http://www.uspto.gov/web/menu/patdata.html. e-file.
     ISSN: 0098-1133.
DT
     Patent
    English
LA
L21 ANSWER 14 OF 44 USPATFULL
AN
      2002:106416 USPATFULL
ΤI
      Nucleic acids, proteins and antibodies
IN
      Rosen, Craig A., Laytonsville, MD, UNITED STATES
       Ruben, Steven M., Olney, MD, UNITED STATES
PΙ
      US 2002055627
                               20020509
                          A1
ΑI
      US 2001-925299
                         A1
                               20010810 (9)
      Continuation of Ser. No. WO 2000-US5883, filed on 8 Mar 2000, UNKNOWN
RLI
PRAT
      US 1999-124270P
                         19990312 (60)
ידת
      Utility
      APPLICATION
FS
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INCL
       INCLS: 435/320.100; 435/325.000; 530/324.000; 530/387.900; 514/002.000;
              435/007.200
NCL
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              536/023.500
      NCLS:
              435/320.100; 435/325.000; 530/324.000; 530/387.900; 514/002.000;
              435/007.200
IC
       [7]
       ICM: A01N037-18
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      C12N015-09; C12N015-63; C12N015-70; C12N015-74; C07K005-00; C07K007-00;
       C07K016-00; C07K017-00; C12N005-00; C12N005-02; C12P021-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
=> d clm 14
L21 ANSWER 14 OF 44 USPATFULL
      What is claimed is:
```

1. An isolated nucleic acid molecule comprising a polynucleotide having a nucleotide sequence at least 95% identical to a sequence selected from

the group consisting of: (a) a polynucleotide fragment of SEQ

ID NO:X or a polynucleotide fragment of the cDNA sequence included in the related cDNA clone, which is hybridizable to SEQ ID NO:X; (b) a polynucleotide encoding a polypeptide fragment of SEQ ID NO:Y or a polypeptide fragment encoded by the cDNA sequence included in the related cDNA clone, which is hybridizable to SEQ ID NO:X; (c) a polynucleotide encoding a polypeptide fragment of a polypeptide encoded by SEQ ID NO:X or a polypeptide fragment encoded by the cDNA sequence included in the related cDNA clone, which is hybridizable to SEQ ID NO:X; polynucleotide encoding a polypeptide domain of SEQ ID NO:Y or a polypeptide domain encoded by the cDNA sequence included in the related cDNA clone, which is hybridizable to SEQ ID NO:X; (e) a polynucleotide encoding a polypeptide epitope of SEQ ID NO:Y or a polypeptide epitope encoded by the cDNA sequence included in the related cDNA clone, which is hybridizable to SEQ ID NO:X; (f) a polynucleotide encoding a polypeptide of SEQ ID NO:Y or the cDNA sequence included in the related cDNA clone, which is hybridizable to SEQ ID NO:X, having biological activity; (g) a polynucleotide which is a variant of SEQ ID (h) a polynucleotide which is an allelic variant of SEQ ID NO:X; (i) a polynucleotide which encodes a species homologue of the SEQ ID NO:Y; (j) a polynucleotide capable of hybridizing under stringent conditions to any one of the polynucleotides specified in (a) - (i), wherein said polynucleotide does not hybridize under stringent conditions to a nucleic acid molecule having a nucleotide sequence of only A residues or of only T residues.

- 2. The isolated nucleic acid molecule of claim 1, wherein the polynucleotide **fragment** comprises a nucleotide sequence encoding a protein.
- 3. The isolated nucleic acid molecule of claim 1, wherein the polynucleotide fragment comprises a nucleotide sequence encoding the sequence identified as SEQ ID NO:Y or the polypeptide encoded by the cDNA sequence included in the related cDNA clone, which is hybridizable to SEQ ID NO:X.
- 4. The isolated nucleic acid molecule of claim 1, wherein the polynucleotide **fragment** comprises the entire nucleotide sequence of SEQ ID NO:X or the cDNA sequence included in the related cDNA clone, which is hybridizable to SEQ ID NO:X.
- 5. The isolated nucleic acid molecule of claim 2, wherein the nucleotide sequence comprises sequential nucleotide deletions from either the C-terminus or the N-terminus.
- 6. The isolated nucleic acid molecule of claim 3, wherein the nucleotide sequence comprises sequential nucleotide deletions from either the C-terminus or the N-terminus.
- 7. A recombinant vector comprising the isolated nucleic acid molecule of claim 1.
- 8. A method of making a recombinant host cell comprising the isolated nucleic acid molecule of claim 1.
- 9. A recombinant host cell produced by the method of claim 8.
- 10. The recombinant host cell of claim 9 comprising vector sequences.
- 11. An isolated polypeptide comprising an amino acid sequence at least 95% identical to a sequence selected from the group consisting of: (a) a polypeptide **fragment** of SEQ ID NO:Y or of the sequence

encoded by the cDNA included in the related cDNA clone; (b) a polypeptide **fragment** of SEQ ID NO:Y or of the sequence encoded by the cDNA included in the related cDNA clone, having biological activity; (c) a polypeptide domain of SEQ ID NO:Y or of the sequence encoded by the cDNA included in the related cDNA clone; (d) a polypeptide **epitope** of SEQ ID NO:Y or of the sequence encoded by the cDNA included in the related cDNA clone; (e) a full length protein of SEQ ID NO:Y or of the sequence encoded by the cDNA included in the related cDNA clone; (f) a variant of SEQ ID NO:Y; (g) an allelic variant of SEQ ID NO:Y; or (h) a species homologue of the SEQ ID NO:Y.

- 12. The isolated polypeptide of claim 11, wherein the full length protein comprises sequential amino acid deletions from either the C-terminus or the N-terminus.
- 13. An isolated **antibody** that binds specifically to the isolated polypeptide of claim 11.
- 14. A recombinant host cell that expresses the isolated polypeptide of claim 11.
- 15. A method of making an isolated polypeptide comprising: (a) culturing the recombinant host cell of claim 14 under conditions such that said polypeptide is expressed; and (b) recovering said polypeptide.
- 16. The polypeptide produced by claim 15.
- 17. A method for preventing, treating, or ameliorating a medical condition, comprising administering to a mammalian subject a therapeutically effective amount of the polypeptide of claim 11 or the polynucleotide of claim 1.
- 18. A method of diagnosing a pathological condition or a susceptibility to a pathological condition in a subject comprising: (a) determining the presence or absence of a mutation in the polynucleotide of claim 1; and (b) diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or absence of said mutation.
- 19. A method of diagnosing a pathological condition or a susceptibility to a pathological condition in a subject comprising: (a) determining the presence or amount of expression of the polypeptide of claim in a biological sample; and (b) diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or amount of expression of the polypeptide.
- 20. A method for identifying a binding partner to the polypeptide of claim 1 comprising: (a) contacting the polypeptide of claim 11 with a binding partner; and (b) determining whether the binding partner effects an activity of the polypeptide.
- 21. The gene corresponding to the cDNA sequence of SEQ ID NO:Y.
- 22. A method of identifying an activity in a biological assay, wherein the method comprises: (a) expressing SEQ ID NO:X in a cell; (b) isolating the supernatant; (c) detecting an activity in a biological assay; and (d) identifying the protein in the supernatant having the activity.
- 23. The product produced by the method of claim 20.

1293-1301. print. ISSN: 0021-9738.

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L1
                E LEONARD J P/AU
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                E GOLDMAN SAMUEL/AU
L3
             78 S E2-E9
                E GOLDMAN S/AU
L4
           1458 S E3
                E OHARA RICHARD/AU
                E OHARA R/AU
L5
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L6
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L7
^{\text{L8}}
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L9
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L22
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     2001:290669 BIOSIS
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TΤ
     Antigen-specific T cell-mediated gene therapy in collagen-induced
     arthritis.
ΑU
     Nakajima, Atsuo; Seroogy, Christine M.; Sandora, Matthew R.; Tarner, Ingo
     H.; Costa, Gina L.; Taylor-Edwards, Cariel; Bachmann, Michael H.; Contag,
     Christopher H.; Fathman, C. Garrison (1)
CS
     (1) Department of Medicine, Division of Immunology and Rheumatology,
     School of Medicine, Stanford University, CCSR Building, Room 2225,
     Stanford, CA, 94305-5111: cfathman@leland.stanford.edu USA
SO
     Journal of Clinical Investigation, (May, 2001) Vol. 107, No. 10, pp.
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DT
     Article
LA
     English
     English
SL
L22
     ANSWER 2 OF 11 WPIDS (C) 2002 THOMSON DERWENT
AN
     2001-244560 [25]
                        WPIDS
DNC C2001-073385
ΤI
     Composition comprising interleukin-12 p40 and IL-B30 polypeptide
     or its segment, useful for ameliorating rheumatoid
     arthritis, osteoarthritis, atherosclerosis, multiple sclerosis,
     vasculitis and tumor.
DC
     B04 D16
IN
     DE WAAL MALEFYT, R; KASTELEIN, R A; LIRA, S A; NARULA, S K; OPPMANN, B;
     RENNICK, D M; WIEKOWSKI, M T
     (SCHE) SCHERING CORP
PA
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     20000908; EP 1210434 A2 EP 2000-961688 20000908, WO 2000-US24686 20000908
    AU 2000073608 A Based on WO 200118051; EP 1210434 A2 Based on WO 200118051
PRAI US 1999-164616P 19991110; US 1999-393090
L22
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ΑN
      2001-08257 BIOTECHDS
ΤI
      Composition containing interleukin-12 p40 and IL-B30 protein or
      its segment, useful for ameliorating rheumatoid
      arthritis, osteoarthritis, atherosclerosis, multiple sclerosis,
      vasculitis and tumor;
         vector-mediated gene transfer and expression in host cell,
         antibody and antagonist
ΑU
      Oppmann B; De Waal Malefyt R; Rennick D M; Kastelein R A; Wiekowski M T;
      Lira S A; Narula S K
PΑ
      Schering-USA
LO
      Kenilworth, NJ, USA.
PΙ
      WO 2001018051 15 Mar 2001
ΑI
      WO 2000-US24686 8 Sep 2000
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      US 1999-164616 10 Nov 1999; US 1999-393090 9 Sep 1999
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LΑ
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OS
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     1999:487326 CAPLUS
AN
     131:129052
DN
ΤI
     Antibodies against human IL-12
IN
     Gately, Maurcie Kent; Presky, David Howard
     F. Hoffmann-La Roche A.-G., Switz.
PA
SO
     PCT Int. Appl., 47 pp.
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 1
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              FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,
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                         Α
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                                               BR 1999-7743
                                                                  19990115
     EP 1049717
                               20001108
                                               EP 1999-904780
                         A2
                                                                  19990115
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L22
    ANSWER 5 OF 11 USPATFULL
AN
       2002:84902 USPATFULL
       Nucleic acids, proteins and antibodies
TI
IN
       Rosen, Craig A., Laytonsville, MD, UNITED STATES
       Ruben, Steven M., Olney, MD, UNITED STATES
PΙ
       US 2002044941
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ΑI
       US 2001-925302
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                                  20010810 (9)
RLI
       Continuation-in-part of Ser. No. WO 2000-US5918, filed on 8 Mar 2000,
       UNKNOWN
                             19990312 (60)
PRAI
       US 1999-124270P
DT
       Utility
FS
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LREP
       HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
       Number of Claims: 23
CLMN
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
LN.CNT 21121
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 6 OF 11 USPATFULL
       2001:221075 USPATFULL
AN
TI
       Retinoid antagonists and use thereof
       Bollag, Werner, Basel, Switzerland
Klaus, Michael, Weil am Rhein, Germany, Federal Republic of
IN
       Mohr, Peter, Basel, Switzerland
       Panina-Bordignon, Paola, Milan, Italy
       Rosenberger, Michael, Caldwell, NJ, United States
       Sinigaglia, Francesco, Milan, Italy
       Hoffman-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
PA
PΙ
       US 6326397
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                                 20011204
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RLI
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EXNAM
       Primary Examiner: Killos, Paul J.
       Johnston, George W., Parise, John P.
CLMN
       Number of Claims: 16
       Exemplary Claim: 1
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       7 Drawing Figure(s); 5 Drawing Page(s)
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CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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L22 ANSWER 7 OF 11 USPATFULL
       2001:63494 USPATFULL
AN
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TI
IN
       Gately, Maurice Kent, Parsippany, NJ, United States
       Presky, David Howard, Glen Ridge, NJ, United States
PA
       Hoffman-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
PΙ
       US 6225117
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EXNAM
       Primary Examiner: Chan, Christina Y.; Assistant Examiner: DiBrino,
LREP
       Johnston, George W., Rocha-Tramaloni, Patricia S., Silverman, Robert A.
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       2000:138395 USPATFULL
ΑN
ΤI
       Treatment of T-helper cell type 2-mediated immune disease by retinoid
       antagonists
IN
       Bollag, Werner, Basel, Switzerland
       Klaus, Michael, Weil am Rhein, Germany, Federal Republic of
       Panina-Bordignon, Paola, Milan, Italy
       Sinigaglia, Francesco, Milan, Italy
PA
       Hoffmann-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
PΙ
       US 6133309
                               20001017
       US 1998-189189
AΙ
                               19981110 (9)
       EP 1997-119776
PRAI
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DT
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       Granted
EXNAM
       Primary Examiner: Travers, Russell
       Johnston, George W., Epstein, William H., Parise, John P.
CLMN
       Number of Claims: 37
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       Exemplary Claim: 1
DRWN
       No Drawings
LN.CNT 780
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 9 OF 11 USPATFULL
AN
       2000:50737 USPATFULL
       Methods and compositions for modulating responsiveness to
ΤI
       corticosteroids
ΙN
       Sekut, Les, Westborough, MA, United States
       Carter, Adam, Newburyport, MA, United States
       Ghayur, Tariq, Grafton, MA, United States
       Banerjee, Subhashis, Shrewsbury, MA, United States
       Tracey, Daniel E., Harvard, MA, United States
PΑ
       BASF Aktiengesellschaft, Rheinland Pfalz, Germany, Federal Republic of
       (non-U.S. corporation)
       US 6054487
PΙ
                               20000425
       US 1997-820692
ΑI
                               19970318 (8)
DT
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       Granted
EXNAM
       Primary Examiner: Jarvis, William R. A.
LREP
       Lahive & Cockfield, LLP
CLMN
       Number of Claims: 46
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Exemplary Claim: 1
ECL
       3 Drawing Figure(s); 3 Drawing Page(s)
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LN.CNT 2404
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 10 OF 11 USPATFULL
AN
       1998:135151 USPATFULL
ΤI
       Human receptor for interleukin-12
IN
       Chua, Anne On, Wayne, NJ, United States
       Gubler, Ulrich Andreas, Glen Ridge, NJ, United States
PΑ
       Hoffmann-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
PΙ
       US 5831007
                               19981103
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       US 1995-419652
                               19950411 (8)
RLI
       Division of Ser. No. US 1994-248532, filed on 31 May 1994, now patented,
       Pat. No. US 5536657 which is a continuation-in-part of Ser. No. US
       1993-94713, filed on 19 Jul 1993, now abandoned
DT
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       Primary Examiner: Ulm, John
       Johnston, George W., Epstein, William H., Bucholz, Briana C.
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       Number of Claims: 10
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DRWN
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CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 11 OF 11 USPATFULL
ΑN
       96:63048 USPATFULL
ΤI
       Recombinant DNA encoding human receptor for interleukin-12
IN
       Chua, Anne O., Wayne, NJ, United States
       Gubler, Ulrich A., Glen Ridge, NJ, United States
PA
       Hoffmann-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
PΙ
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       US 1994-248532
ΑI
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RLI
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FS
       Granted
EXNAM
       Primary Examiner: Ulm, John
LREP
       Gould, George M., Johnston, George W., Kass, Alan P.
       Number of Claims: 10
CLMN
ECL
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LN.CNT 1755
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
=> d clm 8
L22 ANSWER 8 OF 11 USPATFULL
CLM
       What is claimed is:
       1. A method of treating an immunoglobulin E-mediated allergic disease
       selected from the group consisting of allergic rhinitis and bronchial
       asthma, which comprises administering to a subject in need of such
       treatment having said immunoglobulin E-mediated allergic disease an
       effective amount of a retinoid antagonist of the formula:
       ##STR7## wherein R.sup.1 is C.sub.5-10 -alkyl, or a pharmaceutically
       acceptable salt of such retinoid antagonist or a
       pharmaceutically acceptable hydrolyzable ester of such retinoid
       antagonist or its salt.
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2. The method of claim 1, wherein the administering comprises oral

administration.

- 3. The method of claim 2, wherein the oral administration is at a daily dosage of from about 0.05 mg to about 20 mg of the compound per kg of body weight of the subject.
- 4. The method of claim 3, wherein the oral administration is at a daily dosage of from about 0.3 mg to about 1.5 mg of the compound per kg of body weight of the subject.
- 5. The method of claim 2, wherein the oral administration comprises administering a tablet, capsule, pill or sachet containing from about 5 mg to about 200 mg of the compound.
- 6. The method of claim 5, wherein the oral administration comprises administering a tablet, capsule, pill or sachet containing from about 20 mg to about 100 mg of the compound.
- 7. The method of claim 1, wherein the administering comprises topical administration.
- 8. The method of claim 7, wherein the topical administration comprises administering an ointment, cream, lotion, or spray containing from about 0.01 percent to about 5.0 percent by weight of the compound.
- 9. The method of claim 8, wherein the topical administration comprises administering an ointment, cream, lotion, or spray containing from about 0.1 percent to about 1.0 percent by weight of the compound.
- 10. The method of claim 1, wherein the administering comprises inhalation.
 - 11. The method of claim 10, wherein the inhalation comprises administering a nasal aerosol, aerosol for inhalation, or dry powder for inhalation containing from about 0.01 percent to about 5.0 percent by weight of the compound.
 - 12. The method of claim 11, wherein the inhalation comprises administering a nasal aerosol, aerosol for inhalations, or dry powder for inhalation containing from about 0.1 percent to about 1.0 percent by weight of the compound.
 - 13. The method of claim 1, wherein the compound is a retinoid antagonists or a alkali metal salt, alkaline earth metal salt, benzyl ester, lower alkyl ester, or 9-fluorenylmethyl ester thereof.
 - 14. The method of claim 13, wherein the immunoglobulin E-mediated allergic disease is allergic rhinitis.
 - 15. The method of claim 14, wherein the administering comprises oral administration.
 - 16. The method of claim 15, wherein the oral administration is at a daily dosage of from about $0.05~\rm mg$ to about $20~\rm mg$ of the compound per kg of body weight of the subject.
 - 17. The method of claim 16, wherein the oral administration is at a daily dosage of from about 0.3 mg to about 1.5 mg of the compound per kg of body weight of the subject.
 - 18. The method of claim 15, wherein the oral administration comprises administering a tablet, capsule, pill or sachet containing from about 5

mg to about 200 mg of the compound.

- 19. The method of claim 18, wherein the oral administration comprises administering a tablet, capsule, pill or sachet containing from about 20 mg to about 100 mg of the compound.
- 20. The method of claim 19, wherein the topical administration comprises administering an ointment, cream, lotion, or spray containing from about 0.01 percent to about 5.0 percent by weight of the compound.
- 21. The method of claim 20, wherein the topical administration comprises administering an ointment, cream, lotion, or spray containing from about 0.1 percent to about 1.0 percent by weight of the compound.
- 22. The method of claim 14, the administering comprises inhalation.
- 23. The method of claim 22, wherein the inhalation comprises administering a nasal aerosol, aerosol for inhalation, or dry powder for inhalation containing from about 0.01 percent to about 5.0 percent by weight of the compound.
- 24. The method of claim 23, wherein the inhalation comprises administering a nasal aerosol, aerosol for inhalations, or dry powder for inhalation containing from about 0.1 percent to about 1.0 percent by weight of the compound.
- 25. The method of claim 14, wherein the compound is a retinoid antagonists or a alkali metal salt, alkaline earth metal salt, benzyl ester, lower alkyl ester, or 9-fluorenylmethyl ester thereof.
- 26. The method of claim 7, wherein the immunoglobulin E-mediated allergic disease is allergic bronchial asthma.
- 27. The method of claim 26, wherein the administering comprises oral administration.
- 28. The method of claim 27, wherein the oral administration is at a daily dosage of from about 0.05 mg to about 20 mg of the compound per kg of body weight of the subject.
- 29. The method of claim 28, wherein the oral administration is at a daily dosage of from about 0.3 mg to about 1.5 mg of the compound per kg of body weight of the subject.
- 30. The method of claim 27, wherein the oral administration comprises administering a tablet, capsule, pill or sachet containing from about 5 mg to about 200 mg of the compound.
- 31. The method of claim 30, wherein the oral administration comprises administering a tablet, capsule, pill or sachet containing from about 20 mg to about 100 mg of the compound.
- 32. The method of claim 31, wherein the topical administration comprises administering an ointment, cream, lotion, or spray containing from about 0.01 percent to about 5.0 percent by weight of the compound.
- 33. The method of claim 32, wherein the topical administration comprises administering an ointment, cream, lotion, or spray containing from about 0.1 percent to about 1.0 percent by weight of the compound.
- $34.\ \mbox{The method of claim 26, wherein the administering comprises inhalation.}$

- 35. The method of claim 34, wherein the inhalation comprises administering a nasal aerosol, aerosol for inhalation, or dry powder for inhalation containing from about 0.01 percent to about 5.0 percent by weight of the compound.
- 36. The method of claim 35, wherein the inhalation comprises administering a nasal aerosol, aerosol for inhalations, or dry powder for inhalation containing from about 0.1 percent to about 1.0 percent by weight of the compound.
- 37. The method of claim 26, wherein the compound is a retinoid antagonists or a alkali metal salt, alkaline earth metal salt, benzyl ester, lower alkyl ester, or 9-fluorenylmethyl ester thereof.

=> d clm 10

L22 ANSWER 10 OF 11 USPATFULL

CLM What is claimed is:

- 1. A substantially pure, homogeneous and isolated low affinity human Interleukin-12 receptor protein comprising an amino acid sequence selected from SEQ ID NO:2 or SEQ ID NO:3 and which binds specifically to Interleukin-12.
- 2. The Interleukin-12 receptor protein of claim 1 having the amino acid sequence SEQ ID NO:2.
- 3. The low affinity Interleukin-12 receptor protein of claim 1 wherein the Interleukin-12 receptor protein has a K.sub.D of about 2 to about 10 nM.
- 4. The low affinity Interleukin-12 receptor protein of claim 3 wherein the Interleukin-12 receptor protein has a K.sub.D of about 2 to about 5 nM.
- 5. The low affinity Interleukin-12 receptor protein of claim 4 wherein the Interleukin-12 receptor protein has the amino acid sequence SEQ ID NO:2.
- 6. The low affinity Interleukin-12 receptor protein of claim 4 wherein the Interleukin-12 receptor protein has the amino acid sequence SEQ ID NO:3.
- 7. The Interleukin-12 receptor protein of claim 1 having the amino acid sequence SEQ ID NO:3.
- 8. A pharmaceutical composition comprising a substantially pure, homogeneous and isolated low affinity human Interleukin-12 receptor protein comprising an amino acid sequence selected from SEQ ID NO:2 or SEQ ID NO:3 and which binds specifically to Interleukin-12 and a suitable diluent or carrier.
- 9. The pharmaceutical composition of claim 8 wherein the human low affinity Interleukin-12 receptor protein has the amino acid sequence SEQ ID NO:2.
- 10. The pharmaceutical composition of claim 8 wherein the human low affinity Interleukin-12 receptor protein has the amino acid sequence SEQ ID NO:3.

```
(FILE 'HOME' ENTERED AT 11:40:44 ON 11 JUL 2002)
     FILE 'BIOSIS, MEDLINE, AGRICOLA, EMBASE, CABA, WPIDS, JAPIO, BIOTECHDS,
     LIFESCI, CAPLUS, USPATFULL, USPAT2' ENTERED AT 11:42:50 ON 11 JUL 2002
                E LEONARD JOHN P/AU
L1
            108 S E3-E5
                E LEONARD J P/AU
L2
            359 S E3-E4
                E GOLDMAN SAMUEL/AU
L3
             78 S E2-E9
                E GOLDMAN S/AU
L4
           1458 S E3
                E OHARA RICHARD/AU
                E OHARA R/AU
L5
             70 S E3
           2059 S L1-L5
L6
L7
            109 S L6 AND (IL-12 OR RA OR ARTHRITIS)
L8
             43 S L7 AND (ANTIBOD? OR ANTAGONIST?)
L9
             20 DUP REM L8 (23 DUPLICATES REMOVED)
L10
              1 S L9 AND P40
     FILE 'STNGUIDE' ENTERED AT 11:51:09 ON 11 JUL 2002
              0 S L8 AND (FRAGMENT? OR EPITOP?)
L11
L12
              2 S RA OR RHEUMATOID ARTHRITIS
     FILE 'BIOSIS, MEDLINE, AGRICOLA, EMBASE, CABA, WPIDS, JAPIO, BIOTECHDS,
     LIFESCI, CAPLUS, USPATFULL, USPAT2' ENTERED AT 11:55:50 ON 11 JUL 2002
L13
              3 S L9 AND (FRAGMENT? OR EPITOP?)
L14
         656173 S RA OR RHEUMATOID ARTHRITIS
L15
           1079 S L14 AND IL-12
            724 S L15 AND (ANTIBOD? OR EPITOP? OR FRAGMENT? OR ANTAGONIST)
L16
             95 S L16 AND IL-12 (5A) ANTIBOD?
L17
             82 DUP REM L17 (13 DUPLICATES REMOVED)
L18
             18 S L18 AND P40
L19
L20
             52 S L16 AND IL-12 (5A) ANTAGONIST?
L21
             44 DUP REM L20 (8 DUPLICATES REMOVED)
L22
             11 S L21 AND P40
=> s 116 and p40
L23
            67 L16 AND P40
=> s 123 and (antibod? or antagonist?)
L24
            67 L23 AND (ANTIBOD? OR ANTAGONIST?)
=> dup rem 124
PROCESSING COMPLETED FOR L24
L25
             55 DUP REM L24 (12 DUPLICATES REMOVED)
=> s 125 and (antibod? (5a) IL-12 or IL-12 (5a) antagonist?)
   8 FILES SEARCHED...
L26
            21 L25 AND (ANTIBOD? (5A) IL-12 OR IL-12 (5A) ANTAGONIST?)
=> d bib ab 1-21
L26 ANSWER 1 OF 21 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
     2001:290669 BIOSIS
ΑN
DN
     PREV200100290669
     Antigen-specific T cell-mediated gene therapy in collagen-induced
ΤI
```

arthritis.

- AU Nakajima, Atsuo; Seroogy, Christine M.; Sandora, Matthew R.; Tarner, Ingo H.; Costa, Gina L.; Taylor-Edwards, Cariel; Bachmann, Michael H.; Contag, Christopher H.; Fathman, C. Garrison (1)
- CS (1) Department of Medicine, Division of Immunology and Rheumatology, School of Medicine, Stanford University, CCSR Building, Room 2225, Stanford, CA, 94305-5111: cfathman@leland.stanford.edu USA
- SO Journal of Clinical Investigation, (May, 2001) Vol. 107, No. 10, pp. 1293-1301. print. ISSN: 0021-9738.
- DT Article
- LA English
- SL English
- Autoantigen-specific T cells have tissue-specific homing properties, AΒ suggesting that these cells may be ideal vehicles for the local delivery of immunoregulatory molecules. We tested this hypothesis by using type II collagen-specific (CII-specific) CD4+ T hybridomas or primary CD4+ T cells after gene transfer, as vehicles to deliver an immunoregulatory protein for the treatment of collagen-induced arthritis (CIA), a mouse model of rheumatoid arthritis (RA). CII-specific T cells or hybridomas were transduced using retroviral vectors to constitutively express the IL-12 antagonist, IL-12 p40. Transfer of engineered CD4+ T cells after immunization significantly inhibited the development of CIA, while cells transduced with vector control had no effect. The beneficial effect on CIA of IL-12 p40-transduced T cells required TCR specificity against CII, since transfer of T cells specific for another antigen producing equivalent amounts of IL-12 p40 had no effect. In vivo cell detection using bioluminescent labels and RT-PCR showed that transferred CII-reactive T-cell hybridomas accumulated in inflamed joints in mice with CIA. These results indicate that the local delivery of IL-12 p40 by T cells inhibited CIA by suppressing autoimmune responses at the site of inflammation. Modifying antigen-specific T cells by retroviral transduction for local expression of immunoregulatory proteins thus offers a promising strategy for treating RA.
- L26 ANSWER 2 OF 21 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
- AN 1999:518318 BIOSIS
- DN PREV199900518318
- TI Differential regulation of rheumatoid synovial cell interleukin-12 production by tumor necrosis factor alpha and CD40 signals.
- AU Kitagawa, Minetake (1); Mitsui, Hiroshi; Nakamura, Hiroshi; Yoshino, Shinichi; Miyakawa, Shunpei; Ochiai, Naoyuki; Onobori, Makoto; Suzuki, Hiroshi; Sumida, Takayuki
- CS (1) Division of Rheumatology, Department of Internal Medicine, Institute of Clinical Medicine, University of Tsukuba, 1-1-1 Tennodai, Tsukuba-shi, Ibaraki, 305-8575 Japan
- SO Arthritis & Rheumatism, (Sept., 1999) Vol. 42, No. 9, pp. 1917-1926. ISSN: 0004-3591.
- DT Article
- LA English
- SL English
- AB Objective: To investigate the roles of tumor necrosis factor alpha (TNFalpha) and the CD40-CD154 interaction in interleukin-12 (IL-12) production by rheumatoid synovial cells (SC). Methods: Levels of IL-12 (p40 and p70) in synovial tissue and culture supernatants of SC from patients with rheumatoid arthritis (RA), osteoarthritis (OA), and ankylosing spondylitis (AS) were assayed by enzyme-linked immunosorbent assay. Effects of anti-CD154 and anti-TNFalpha antibody on spontaneous and lipopolysaccharide (LPS)-stimulated IL-12

```
production by SC were examined. Effects of immobilized anti-CD3 treatment
     and depletion of CD4+ T cells on IL-12 production were
     also tested. CD154 expression by synovial T cells and intracellular
     IL-12 production during culture were analyzed by flow
     cytometry. Results: IL-12 p40 and p70 levels
     in RA synovial tissue and spontaneous IL-12
     p40 production by SC from RA patients were significantly
     higher than the levels in OA and AS patients. Spontaneous IL-
     12 production by SC from RA patients significantly
     decreased after depletion of CD4+ T cells from SC or after application of
     anti-CD154 antibody, but not by treatment with anti-TNFalpha
     antibody. Anti-CD3 antibody stimulation increased
     spontaneous IL-12 p40 production and CD154
     expression by synovial T cells. The increment of IL-12
     p40 production by anti-CD3 was abrogated by anti-CD154
     antibody. IL-12 p40 production was
     also increased by LPS stimulation. LPS-stimulated IL-12
     production was inhibited by anti-TNFalpha antibody, but not by T
     cell depletion and anti-CD154 antibody treatment. The TNFalpha
     inhibitor rolipram inhibited LPS-stimulated IL-12
     p40 production by RA SC more strongly than spontaneous
     production. TNFalpha restored LPS-stimulated IL-12
     production that had been inhibited by rolipram. Conclusion: IL-
     12 production in RA is regulated by 2 different
     pathways. One pathway is T cell dependent, predominantly through a
     CD40-CD154 interaction, while the other is T cell independent, mediated
     through TNFalpha. Inhibition of IL-12 production by
     interference with CD40-CD154 interaction and TNFalpha production may be a
     potential therapeutic strategy for treating RA.
L26 ANSWER 3 OF 21 WPIDS (C) 2002 THOMSON DERWENT
     2001-244560 [25]
                        WPIDS
DNC C2001-073385
     Composition comprising interleukin-12 p40 and IL-B30 polypeptide
     or its segment, useful for ameliorating rheumatoid
     arthritis, osteoarthritis, atherosclerosis, multiple sclerosis,
     vasculitis and tumor.
     B04 D16
     DE WAAL MALEFYT, R; KASTELEIN, R A; LIRA, S A; NARULA, S K; OPPMANN, B;
     RENNICK, D M; WIEKOWSKI, M T
     (SCHE) SCHERING CORP
CYC 92
     WO 2001018051 A2 20010315 (200125)* EN
                                              69p
        RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
           NL OA PT SD SE SL SZ TZ UG ZW
        W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CZ DE DK DM DZ
            EE ES FI GB GD GE HR HU ID IL IN IS JP KG KR KZ LC LK LR LT LU LV
           MA MD MG MK MN MX MZ NO NZ PL PT RO RU SE SG SI SK SL TJ TM TR TT
           TZ UA UZ VN YU ZA
     AU 2000073608 A 20010410 (200137)
     EP 1210434
                  A2 20020605 (200238)
                                        EN
         R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
ADT WO 2001018051 A2 WO 2000-US24686 20000908; AU 2000073608 A AU 2000-73608
     20000908; EP 1210434 A2 EP 2000-961688 20000908, WO 2000-US24686 20000908
FDT AU 2000073608 A Based on WO 200118051; EP 1210434 A2 Based on WO 200118051
PRAI US 1999-164616P 19991110; US 1999-393090
                                                 19990909
     WO 200118051 A UPAB: 20010508
     NOVELTY - A composition (I) comprising a substantially pure polypeptide
     comprising a number of distinct segments of at least 7 contiguous amino
     acids from interleukin (IL)-12 p40 and/or
     IL-B30, and a substantially pure polypeptide comprising a segment of at
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DC

TN

PA

PI

least 11 contiguous amino acids from IL-12 p40
and/or IL-B30.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) an isolated or recombinant nucleic acid (II) encoding (I);
- (2) a cell (III) comprising (II);
- (3) a nucleic acid (IV) which hybridizes under wash conditions of 30 minutes at 50 deg. C and less than 1M salt to the natural mature coding portion of primate IL-12 p40 and IL-B30;
- (4) an antagonist (V) of IL-12
 p40/IL-B30 combined with a tumor necrosis factor-alpha (TNF alpha)
 antagonist, an IL-12 antagonist,
 IL-10, or steroids;
- (5) a binding compound (VI) comprising an antigen binding site from an **antibody**, which specifically binds to (I) and comprising a substantially pure polypeptide comprising **IL-12 p40** and IL-B30 polypeptide, or a polypeptide comprising **IL** -12 **p40** fused to IL-B30, but not to either **IL** -12 **p40** or IL-B30 polypeptide;
 - (6) a kit (VII) comprising:
- (a) (I), and a compartment comprising the polypeptide, or instructions for use or disposal of reagents in the kit;
- (b) (II), and a compartment comprising (II), a compartment further comprising a primate $IL-12\ p40$ or IL-B30, or instructions for use or disposal of reagents in the kit or (VI); and
- (c) a compartment comprising (VI), or instructions for use or disposal of reagents in the kit;
- (7) producing (M1) an antigen:antibody complex, involves contacting, under appropriate conditions, a primate IL-12 p40/IL-B30 composition with (VI), allowing the complex to form;
- (8) a composition (VIII) comprising (VI) which is sterile, or (VI) and a carrier such as an aqueous compound, including water, saline, and/or buffer;
- (9) increasing (M2) the secretion of a primate IL-B30 involves expressing the polypeptide with IL-12 p40 or increasing the secretion of a primate IL-12 p40 involves expressing the IL-12 p40 with IL-B30; and
- (10) screening (M3) for a receptor which binds (I) involves contacting the complex to a cell expressing the receptor under conditions allowing the complex to bind to the receptor, forming a detectable interaction.

ACTIVITY - Antirheumatic; 'antiarthritic; osteopathic; antiarthritic; neuroprotective; antiarteriosclerotic; cerebroprotective; vasotropic; cytostatic; antitumor; immunosuppressive.

MECHANISM OF ACTION - Modulator of physiology or development of cell in host; inducer of memory T-cell proliferation (claimed); modulator of trafficking or activation of leukocyte.

No supporting data is given.

USE - (I) is useful for modulating physiology or development of a cell or tissue in a host organism by contacting the cell with (I) or (V), resulting in an increased or decreased production of Interferon-gamma (IFN gamma), an enhanced Th1 response such as anti-tumor effect, adjuvant effect, anti-viral effect or antagonized allergic effect, and amelioration of an autoimmune condition or a chronic inflammatory condition. The contacting is in combination with IL-18, IL-12, radiation therapy or chemotherapy, an immune adjuvant or an anti-viral therapeutic. The antagonist is an antibody against IL-12 receptor subunit beta 1. The antagonist or agonist of mammalian IL-B30 protein is useful for modulating the inflammatory response in an animal, by contacting cells in the animal with

the agonist or antagonist, where the animal exhibits signs or symptoms of an acute phase inflammatory response in skin, lung, gastrointestinal, or liver tissue. The modulation is accelerating maturation of neutrophils into platelets and has an effect on immunoglobin A and G (IgA and IgG). The antagonist is an antibody which binds to the mammalian IL-B30 or blocks signaling mediated by mammalian IL-B30. The antagonist or agonist is administered in combination with an anti-inflammatory cytokine agonist or antagonist, an analgesic, an anti-inflammatory agent, or a steriod. IL-B30 or its agonist is useful inducing the proliferation of memory T-cells (all claimed).

Agonist or antagonist of IL-B30 protein is useful for modulating the trafficking or activation of a leukocyte in an animal experiencing science or symptoms of autoimmunity, an inflammatory condition, tissue specific autoimmunity, degenerative autoimmunity, rheumatoid arthritis, osteoarthritis, atherosclerosis, multiple sclerosis, vasculitis, delayed hypersensitivities, skin grafting, a transplant, spinal injury, stroke, neurodegeneration, an infectious disease, ischemia, cancer, tumors, multiple myeloma, Castleman's disease, postmenopausal osteoporosis or IL-6-associated diseases.

IL-12 p40/IL-B30 is useful as an immunogen for the production a antisera or antibodies specific for binding. (I) is useful for in vitro assays, scientific research, and the synthesis or manufacture of nucleic acids or antibodies. (II) is useful in forensic science. Dwg.0/0

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Dwg.0/0
L26 ANSWER 4 OF 21 WPIDS (C) 2002 THOMSON DERWENT
AN
     1999-458684 [38]
                        WPIDS
DNC C1999-134705
TI
    New antibodies to human interleukin-12, used for treating
     diseases associated with increased IL-12 bioactivity
     such as autoimmune disorders, e.g. multiple sclerosis.
DC
     B04 D16
ΙN
    GATELY, M K; PRESKY, D H; GATELY, M
PΑ
     (HOFF) HOFFMANN LA ROCHE & CO AG F; (HOFF) HOFFMANN LA ROCHE INC
CYC 85
PΙ
    WO 9937682
                  A2 19990729 (199938) * EN
        RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL
            OA PT SD SE SZ UG ZW
        W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE
            GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD
            MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA
            UG UZ VN YU ZW
     ZA 9900452
                  A 19990929 (199947)
                                              48p
    AU 9925177
                  A 19990809 (200001)
    BR 9907743
                  A 20001017 (200056)
    EP 1049717
                 A2 20001108 (200062)
                                         EN
        R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU NL PT SE
    US 6225117
                 B1 20010501 (200126)
    CN 1288468
                  A 20010321 (200137)
    KR 2001034315 A 20010425 (200164)
    MX 2000007124 A1 20010301 (200170)
    JP 2002501085 W 20020115 (200207)
                                              50p
```

ADT WO 9937682 A2 WO 1999-EP202 19990115; ZA 9900452 A ZA 1999-452 19990121; AU 9925177 A AU 1999-25177 19990115; BR 9907743 A BR 1999-7743 19990115, WO 1999-EP202 19990115; EP 1049717 A2 EP 1999-904780 19990115, WO 1999-EP202 19990115; US 6225117 B1 Provisional US 1998-72333P 19980123, US 1999-232522 19990119; CN 1288468 A CN 1999-802310 19990115; KR 2001034315 A KR 2000-708036 20000722; MX 2000007124 A1 MX 2000-7124 20000720; JP 2002501085 W WO 1999-EP202 19990115, JP 2000-528602 19990115
FDT AU 9925177 A Based on WO 9937682; BR 9907743 A Based on WO 9937682; EP

1049717 A2 Based on WO 9937682; JP 2002501085 W Based on WO 9937682
PRAI US 1998-72333P 19980123; US 1999-232522 19990119
AB WO 9937682 A UPAB: 19991122
NOVELTY - New antibodies to human interleukin-12 are produced using a mammal which is deficient in the gene encoding the p35 or p40 subunit of IL-12.

DETAILED DESCRIPTION - (A) An antibody to the human interleukin (IL)-12 p75 heterodimer which consists of a p35 subunit and a p40 subunit, where the antibody:

(i) immunologically reacts with an epitope presented by the p75 heterodimer of human IL-12, but is not immunologically reactive with an epitope presented by the p40 subunit; and

(ii) is produced from a mammal, preferably a mouse which is deficient in the gene encoding the p35 subunit or the p40 subunit of IL-12.

INDEPENDENT CLAIMS are also included for the following:

- (1) a monoclonal **antibody** (MAb) to human **IL- 12** which consists of a p35 subunit and a **p40** subunit forming a p75 heterodimer, where the MAb;
- (i) immunologically reacts with an **epitope** presented by the p75 heterodimer of human **IL-12**, but is not immunologically reactive with any **epitope** presented by the **p40** subunit; and
- (ii) neutralizes at least 90% of the bioactivity of human IL-12;
- (2) a hybridoma that produces an antibody as in (A) or (1).

 ACTIVITY The antibodies can neutralize IL
 12 bioactivity as determined by ability to block IL
 12 stimulated phytohemagglutinin A (PHA)-activated lymphoblast proliferation and interferon- gamma production by PHA-activated lymphoblasts. The 5F2, 16F2, 16G2 and 20E11 antibodies were able to inhibit human IL-12 stimulated PHA activated human lymphoblast proliferation by at least 90%. These anti-human heterodimer specific IL-12 antibodies were able to inhibit greater than 90% of IL-12 stimulated IFN-gamma production when used at 0.5 micro g/ml.

USE - The antibodies can be used for controlling diseases with pathologies that are mediated through immune mechanisms, particularly diseases associated with increased IL-12 bioactivity that results in aberrant Th1-type helper cell activity like autoimmune disorders, e.g. multiple sclerosis, rheumatoid arthritis, autoimmune diabetes mellitus, and inflammatory bowel disease (IBD) including Crohn's disease and ulcerative colitis (claimed). They can also be used to treat transplantation/graft-versus-host disease and septic shock.

ADVANTAGE - The anti-IL-12 antibodies exhibit higher potency and greater efficacy than known heterodimer specific IL-12 antibodies. Dwg.0/7

ANSWER 5 OF 21 BIOTECHDS COPYRIGHT 2002 THOMSON DERWENT AND ISI 2001-08257 BIOTECHDS

Composition containing interleukin-12 p40 and IL-B30 protein or its segment, useful for ameliorating rheumatoid arthritis, osteoarthritis, atherosclerosis, multiple sclerosis, vasculitis and tumor;

vector-mediated gene transfer and expression in host cell, antibody and antagonist

AU Oppmann B; De Waal Malefyt R; Rennick D M; Kastelein R A; Wiekowski M T; Lira S A; Narula S K

PA Schering-USA

```
Kenilworth, NJ, USA.
 LO
       WO 2001018051 15 Mar 2001
 PΙ
 ΑI
       WO 2000-US24686 8 Sep 2000
 PRAI
       US 1999-164616 10 Nov 1999; US 1999-393090 9 Sep 1999
       Patent
 DT
       English
 LA
 OS
       WPI: 2001-244560 [25]
 AΒ
       A composition containing a substantially pure protein containing a number
       of distinct segments of at least 7 contiguous amino acids from
       interleukin (IL)-12 p40 and/or IL-B30, and
       a substantially pure protein containing a segment of at least 11
       contiguous amino acids from IL-12 p40
       and/or IL-B30, is new. Also claimed are: a recombinant nucleic acid
       encoding the protein; a cell containing the nucleic acid; a nucleic acid
       which hybridizes under wash conditions of 30 min at 50 deg and less than
       1M salt to the natural mature coding portion of primate IL-
       12 p40 and IL-B30; an antagonist of
       IL-12 p40/IL-B30 combined with a tumor
       necrosis factor-alpha (TNF-alpha) antagonist, an IL-
       12 antagonist, IL-10 or steroids; a binding compound
       containing an antigen binding site from an antibody which
       specifically binds to the protein; a kit containing the composition,
       polynucleotide and a binding compound; producing an antigen:
       antibody complex; a composition containing a binding compound;
       increasing the secretion of a primate IL-B30; and screening for a
       receptor which binds the composition. The composition is useful for
       modulating physiology or development of a cell or tissue0. (69pp)
 L26 ANSWER 6 OF 21 USPATFULL
 AN
        2002:157653 USPATFULL
 ΤI
        Triazine compounds
 IN
        Ono, M, Lexington, MA, UNITED STATES
        Sun, Lijun, Harvard, MA, UNITED STATES
        Zhang, Shijie, Nashua, NH, UNITED STATES
        Przewloka, Teresa, Burlington, MA, UNITED STATES
        James, David A., Cambridge, MA, UNITED STATES
        Ding, Wenli, Worcester, MA, UNITED STATES
        Wada, Yumiko, Waltham, MA, UNITED STATES
·PI
        US 2002082259
                           A1
                                20020627
        US 2001-6624
 ΑI
                           A1
                                20011130 (10)
        Continuation-in-part of Ser. No. US 2000-594362, filed on 15 Jun 2000,
 RLI
        PENDING
        Utility
 DT
 FS
        APPLICATION
        Y. ROCKY TSAO, Fish & Richardson P.C., 225 Franklin Street, Boston, MA,
 LREP
        02110-2804
 CLMN
        Number of Claims: 48
 ECL
        Exemplary Claim: 1
        No Drawings
 DRWN
 LN.CNT 879
 AB
        This invention relates to triazine compounds of formula (I):
                                                                        ##STR1##
        R.sub.1 is , aryl,
                             ##STR2##
        or heteroaryl; each of R.sub.2, R.sub.4, and R.sub.5, independently, is
        R.sup.c, halogen, nitro, nitroso, cyano, azide, isothionitro, SR.sup.c,
        or OR.sup.c; R.sub.3 is R.sup.c, alkenyl, alkynyl, aryl, heteroaryl,
        cyclyl, heterocyclyl, OR.sup.c, OC(O)R.sup.c, SO.sub.2R.sup.c,
        S(O)R.sup.c, S(O.sub.2)NR.sup.cR.sup.d, SR.sup.c, NR.sup.cR.sup.d,
        NR.sup.cCOR.sup.d, NR.sup.cC(0)OR.sup.d, NR.sup.cC(0)NR.sup.cR.sup.d,
        NR.sup.cSO.sub.2R.sup.d, COR.sup.c, C(0)OR.sup.c, or
        C(0)NR.sup.cR.sup.d; n is 0, 1, 2, 3, 4, 5, 6, or 7; X is 0, S, S(0),
```

S(O.sub.2), or NR.sup.c; Y is a covalent bond, CH.sub.2, C(O), C.dbd.N--R.sup.c, C.dbd.N--OR.sup.c, C.dbd.N--SR.sup.c, O, S, S(O), or S(O.sub.2); Z is N; and W is O, S, S(O), S(O.sub.2), NR.sup.c, or NC(O)R.sup.c; in which each of R.sup.a and R.sup.b, independently, is H, alkyl, aryl, heteroaryl; and each of R.sup.c and R.sup.d, independently, is H, alkyl, or alkylcarbonyl.

L26 ANSWER 7 OF 21 USPATFULL AN 2002:84902 USPATFULL TΙ Nucleic acids, proteins and antibodies IN Rosen, Craig A., Laytonsville, MD, UNITED STATES Ruben, Steven M., Olney, MD, UNITED STATES PΙ US 2002044941 Α1 20020418 ΑI US 2001-925302 A1 20010810 (9) RLI Continuation-in-part of Ser. No. WO 2000-US5918, filed on 8 Mar 2000, UNKNOWN PRAI US 1999-124270P 19990312 (60) Utility DTFS APPLICATION LREP HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850 CLMN Number of Claims: 23 ECL Exemplary Claim: 1 DRWN No Drawings LN.CNT 21121 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AB The present invention relates to novel lung cancer related polynucleotides, the polypeptides encoded by these polynucleotides herein collectively referred to as "lung cancer antigens," and antibodies that immunospecifically bind these polypeptides, and the use of such lung cancer polynucleotides, antigens, and

antibodies for detecting, treating, preventing and/or prognosing disorders of the lung, including, but not limited to, the presence of lung cancer and lung cancer metastases. More specifically, isolated lung cancer nucleic acid molecules are provided encoding novel lung cancer polypeptides. Novel lung cancer polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human lung cancer polynucleotides, polypeptides, and/or antibodies. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to the lung, including lung cancer, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The invention further relates to methods and/or compositions for inhibiting or promoting the production and/or function of the polypeptides of the invention.

L26 ANSWER 8 OF 21 USPATFULL AN 2001:229210 USPATFULL

TI Methods for enhancing oral tolerance and treating autoimmune disease using inhibitors of interleukin-12

IN Strober, Warren, Bethesda, MD, United States
 Kelsall, Brian, Washington, DC, United States
 Marth, Thomas, Kensington, MD, United States

PA Government of the United States of America, Department of Health and Human Services (U.S. corporation)

PI US 2001051159 A1 20011213

AI US 2000-732502 A1 20001207 (9)

RLI Continuation of Ser. No. US 1999-284169, filed on 9 Apr 1999, ABANDONED A 371 of International Ser. No. WO 1996-US16007, filed on 11 Oct 1996, UNKNOWN

DT Utility

FS APPLICATION

LREP mary 1. miller THE CANDLER BUILDING, needle & rosenberg, p.c., 127

peachtree street, n.e., atlanta, GA, 30303-1811

CLMN Number of Claims: 20 ECL Exemplary Claim: 1

DRWN No Drawings LN.CNT 1252

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention provides a method for enhancing oral tolerance to an antigen associated with an autoimmune disease in a subject having the autoimmune disease comprising orally administering to the subject an antigen associated with the autoimmune disease and administering an inhibitor of interleukin-12 in amounts sufficient to enhance oral tolerance. Also provided in the present invention is a method for treating or preventing an autoimmune disease in a subject comprising orally administering to the subject an antigen associated with the autoimmune disease and administering an inhibitor of interleukin-12 in amounts sufficient to treat or prevent the autoimmune disease, thereby treating or preventing the autoimmune disease.

L26 ANSWER 9 OF 21 USPATFULL

AN 2001:221075 USPATFULL

TI Retinoid antagonists and use thereof

IN Bollag, Werner, Basel, Switzerland

Klaus, Michael, Weil am Rhein, Germany, Federal Republic of

Mohr, Peter, Basel, Switzerland

Panina-Bordignon, Paola, Milan, Italy

Rosenberger, Michael, Caldwell, NJ, United States

Sinigaglia, Francesco, Milan, Italy

PA Hoffman-La Roche Inc., Nutley, NJ, United States (U.S. corporation)

PI US 6326397 B1 20011204

AI US 1999-307009 · 19990507 (9)

RLI Continuation-in-part of Ser. No. US 1998-189189, filed on 10 Nov 1998

DT Utility

FS GRANTED

EXNAM Primary Examiner: Killos, Paul J.

LREP Johnston, George W., Parise, John P.

CLMN Number of Claims: 16 ECL Exemplary Claim: 1

DRWN 7 Drawing Figure(s); 5 Drawing Page(s)

LN.CNT 1573

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to novel retinoid antagonists of the formula I ##STR1##

wherein the dotted bond can be either hydrogenated or form a double bond; and, when the dotted bond forms a double bond, R.sup.1 is lower alkyl and R.sup.2 is hydrogen; and, when the dotted bond is hydrogenated, R.sup.1 and R.sup.2 taken together are methylene to form a cis-substituted cyclopropyl ring; R.sup.3 is hydroxy or lower alkoxy; R.sup.4 is alkyl or alkoxy; and R.sup.5 and R.sup.6 are, independently, a C.sub.4-12 alkyl or a 5-12 cycloalkyl substituent containing from 1-3 rings which are either unsubstituted or substituted with from 1-3 lower alkyl groups, with the carbon atom of R.sup.5 and R.sup.6 being linked to the remainder of the molecule to form a quaternary carbon atom pharmaceutically acceptable salts of carbocylic acids of the formula I; as well as method for the treatment of osteoporosis and preneoplastic and neoplastic diseases, and a method for reducing or abolishing adverse events in subjects receiving retinoid agonist treatment by administering a retinoid antagonist.

```
AN
       2001:63494 USPATFULL
TI
       Antibodies against human IL-12
       Gately, Maurice Kent, Parsippany, NJ, United States
IN
       Presky, David Howard, Glen Ridge, NJ, United States
PA
       Hoffman-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
       US 6225117
ΡI
                          В1
                               20010501
ΑI
       US 1999-232522
                               19990119 (9)
       US 1998-72333P
PRAI
                           19980123 (60)
DT
       Utility
FS
       Granted
EXNAM
       Primary Examiner: Chan, Christina Y.; Assistant Examiner: DiBrino,
LREP
       Johnston, George W., Rocha-Tramaloni, Patricia S., Silverman, Robert A.
CLMN
       Number of Claims: 23
ECL
       Exemplary Claim: 1
DRWN
       7 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 1122
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       The present invention relates to novel p75 heterodimer specific
       anti-human IL-12 antibodies that are
       characterized by a higher potency and greater efficacy in neutralizing
       human IL-12 bioactivity than known heterodimer
       specific IL-12 monoclonal antibodies. The
       heterodimer specific antibodies recognize one or more
       epitopes of the human IL-12 p75 heterodimer,
       but do not bind to the p40 subunit alone. The heterodimer
       specific IL-12 antibodies neutralize
       rhesus monkey IL-12 bioactivity with a potency
       similar to their potency for neutralizing human IL-12
       bioactivity making them useful IL-12
       antagonists for in vivo studies in the rhesus monkey.
L26 ANSWER 11 OF 21 USPATFULL
AN
       2000:138395 USPATFULL
ΤI
       Treatment of T-helper cell type 2-mediated immune disease by retinoid
       antagonists
       Bollag, Werner, Basel, Switzerland
IN
       Klaus, Michael, Weil am Rhein, Germany, Federal Republic of
       Panina-Bordignon, Paola, Milan, Italy
       Sinigaglia, Francesco, Milan, Italy
PΑ
       Hoffmann-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
PΙ
       US 6133309
                               20001017
ΑI
       US 1998-189189
                               19981110 (9)
PRAI
       EP 1997-119776
                           19971112
DT
       Utility
FS
       Granted
       Primary Examiner: Travers, Russell
EXNAM
       Johnston, George W., Epstein, William H., Parise, John P.
CLMN
       Number of Claims: 37
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
LN.CNT 780
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Retinoids with retinoid receptor antagonistic activity,
       pharmaceutically acceptable salts and pharmaceutically acceptable
       hydrolyzable esters thereof, have been found efficacious in treating
       T-helper cell type 2 (Th2)-mediated immune diseases, such as
       immunoglobulin E (IgE)-mediated allergic diseases.
L26 ANSWER 12 OF 21 USPATFULL
       2000:98551 USPATFULL
AN
ΤI
       Treatment of papillomavirus-associated lesions
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Stanley, Margaret Anne, Cambridge, United Kingdom
IN
       Scarpini, Cinzia Giuseppina, Cambridge, United Kingdom
       Cambridge University Technical Services, Ltd., Cambridge, United Kingdom
PA
       (non-U.S. corporation)
PΙ
       US 6096869
                               20000801
       US 1996-621841
ΑI
                              19960322 (8)
       GB 1995-5784
                           19950322
PRAI
       Utility
ידים
FS
       Granted
      Primary Examiner: Park, Hankyel
EXNAM
       Klarquist Sparkman Campbell Leigh & Whinston, LLP
CLMN
       Number of Claims: 13
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
LN.CNT 1293
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Interleukin-12 (IL-12) or a functional analogue
       thereof, or a polynucleotide encoding IL-12 or
       encoding a functional analogue thereof, is used as a therapeutic
       material or adjuvant in treating papillomavirus-associated lesions e.g.
       warts due to HPV 6 and/or 11, e.g. condyloma acuminata. IL-
       12 or a vector encoding it for endogenous production can be used
       together with a vaccine such as a papillomavirus antigen, or a vector
       encoding a papillomavirus antigen.
L26 ANSWER 13 OF 21 USPATFULL
ΑN
       2000:87729 USPATFULL
TΙ
       Method of converting a Th2-type allergic immune response into a Th1-type
       immune response
IN
       DeKruyff, Rosemarie H., Stanford, CA, United States
       Umetsu, Dale T., Stanford, CA, United States
PA
       The Board of Trustees of the Leland Stanford Junior University, Palo
       Alto, CA, United States (U.S. corporation)
ΡI
       US 6086898
                               20000711
       US 1999-339068
ΑI
                               19990623 (9)
       US 1998-90390P
                           19980623 (60)
PRAI
DT
       Utility
FS
       Granted
EXNAM
       Primary Examiner: Chan, Christina Y.; Assistant Examiner: Ewoldt, Gerald
LREP
       Bozicevic, Field & Francis, Sherwood, Pamela
       Number of Claims: 19
CLMN
ECL
       Exemplary Claim: 1
DRWN
       17 Drawing Figure(s); 10 Drawing Page(s)
LN.CNT 1767
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       Methods are provided for the treatment of allergic and other immune
       disorders associated with overproduction of Th2 type cytokines by
       antigen specific T cells. Immunotherapy with adjuvants, as provided in
       the present invention, greatly inhibits the development of airway
       hyperreactivity and airway inflammation. Such immunotherapy is shown to
       reverse ongoing airway disease, and convert allergic inflammatory
       responses into protective immune responses. Conditions of particular
       interest include allergic conditions associated with production of Th2
       cytokines and/or IgE antibodies, asthma, allergic rhinitis,
       and anaphylactic reactions. The addition of adjuvant induces a Th1-type
       immune response and can redirect an established Th2-type response to a
       Th1-type response for the selected antigen. Preferably, antigen-specific
       IgE production is reduced without altering the intensity of the
       antigen-specific proliferative response. One particularly preferred
       adjuvant for use in accordance with the present invention is a Listeria
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adjuvant.

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L26 ANSWER 14 OF 21 USPATFULL
       2000:87707 USPATFULL
ΑN
TI
       Methods and compositions for the inhibition of interleukin-12 production
IN
       Karp, Christopher L., Lutherville, MD, United States
       Trinchieri, Giorgio, Wynnewood, PA, United States
       Wysocka, Maria, Wynnewood, PA, United States
       Griffin, Diane E., Hunt Valley, MD, United States
PA
       The Wistar Insitute, Philadelphia, PA, United States (U.S. corporation)
       Johns Hopkins University, Baltimore, MD, United States (U.S.
       corporation)
       US 6086876
PΙ
                                20000711
ΑI
       US 1998-19862
                                19980206 (9)
PRAI
       US 1997-37722P
                            19970207 (60)
DT
       Utility
FS
       Granted
EXNAM
       Primary Examiner: Kemmerer, Elizabeth; Assistant Examiner: Romeo, David
LREP
       Akin, Gump, Strauss, Hauer & Feld, L.L.P.
CLMN
       Number of Claims: 12
       Exemplary Claim: 1
ECL
DRWN
       13 Drawing Figure(s); 18 Drawing Page(s)
LN.CNT 1487
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AR
       The invention includes compositions and methods for selective
       suppression of IL-12 production in a cell. Methods
       of treating a human having a disease associated with dysregulated
       IL-12 production are also provided.
L26 ANSWER 15 OF 21 USPATFULL
AN
       2000:50737 USPATFULL
TΙ
       Methods and compositions for modulating responsiveness to
       corticosteroids
IN
       Sekut, Les, Westborough, MA, United States
       Carter, Adam, Newburyport, MA, United States
       Ghayur, Tariq, Grafton, MA, United States
       Banerjee, Subhashis, Shrewsbury, MA, United States
       Tracey, Daniel E., Harvard, MA, United States
PA
       BASF Aktiengesellschaft, Rheinland Pfalz, Germany, Federal Republic of
       (non-U.S. corporation)
PI
       US 6054487
                                20000425
                                19970318 (8)
ΑI
       US 1997-820692
DT
       Utility
FS
       Granted
EXNAM Primary Examiner: Jarvis, William R. A.
LREP
       Lahive & Cockfield, LLP
CLMN
       Number of Claims: 46
ECL
       Exemplary Claim: 1
DRWN
       3 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 2404
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Method for modulating responsiveness to corticosteroids in a subject are
       provided. In the method of the invention, an agent which antagonizes a
       factor that regulates production of IFN-.gamma. in the subject is
       administered to the subject in combination with a corticosteroid such
       that responsiveness of the subject to the corticosteroid is modulated as
       compared to when a corticosteroid alone is administered to the subject.
       In one embodiment, the agent is an interferon-.gamma. inducing factor (IGIF) antagonist. In another embodiment, the agent is an
       interleukin-12 (IL-12) antagonist. In a
       preferred embodiment, the agent is an inhibitor of a caspase family
       protease, preferably an ICE inhibitor. In another preferred embodiment,
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antibody. Other preferred agents include phosphodiesterase IV inhibitors and beta-2 agonists. The methods of the invention can be used in the treatment of a variety of inflammatory and immunological diseases and disorders. Pharmaceutical compositions comprising an agent which antagonizes a factor that regulates production of IFN-.gamma. in a subject, a corticosteroid and a pharmaceutically acceptable carrier are also provided. A preferred composition comprises an ICE inhibitor, a corticosteroid and a pharmaceutically acceptable carrier.

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L26 ANSWER 16 OF 21 USPATFULL
       1999:155952 USPATFULL
ΤI
       Dihomo-seco-cholestanes
IN
       Barbier, Pierre, Rixheim, France
       Mohr, Peter, Basel, Switzerland
       Muller, Marc, Saint-Louis, France
       Self, Christopher, West Caldwell, NJ, United States
       Hoffmann-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
PA
PΙ
       US 5994569
                               19991130
       US 1998-115188
ΑI
                               19980714 (9)
PRAI
       EP 1997-112225
                           19970717
DΤ
       Utility
FS
       Granted
EXNAM Primary Examiner: Dees, Jose' G.; Assistant Examiner: Badio, Barbara
LREP
       Johnston, George W., Rocha-Tramaloni, Patricia S., Silverman, Robert A.
CLMN
       Number of Claims: 28
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
LN.CNT 1220
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Polyunsaturated 24a,24b-dihomo-9,10-secocholestane derivatives of
       formula ##STR1## wherein A is a single or double bond,
       B.sup.1 and B.sup.2 are each independently CH.dbd.CH or C.tbd.C,
       T is CH.sub.2 or CH.sub.2 CH.sub.2,
       X is --CH.sub.2 -- or >C.dbd.CH.sub.2,
       R.sup.1 is H, F or OH,
       R.sup.2 and R.sup.3 are each independently lower alkyl or CF.sub.3, or
       C(R.sup.2, R.sup.3) is C.sub.3-6 -cycloalkyl,
       are useful in the treatment or prevention of vitamin D dependent
       disorders and of IL-12-dependent autoimmune
       diseases, particularly psoriasis, basal cell carcinomas, disorders of
       keratinization and keratosis, leukemia, osteoporosis,
       hyperparathyroidism accompanying renal failure, multiple sclerosis,
       transplant rejection, graft vs. host disease, rheumatoid
       arthritis, insulin-dependent diabetes mellitus, inflammatory
       bowel disease, septic shock and allergic encephalomyelitis.
L26 ANSWER 17 OF 21 USPATFULL
AN
       1999:75759 USPATFULL
TI
       Low affinity human IL-12 beta2 receptor
IN
       Gubler, Ulrich Andreas, Glen Ridge, NJ, United States
       Presky, David Howard, Glen Ridge, NJ, United States
PΑ
       Hoffmann-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
PΙ
       US 5919903
                               19990706
      US 1997-914520
ΑI
                               19970819 (8)
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Division of Ser. No. US 1996-685118, filed on 23 Jul 1996
RLI
       US 1995-1701P
PRAI
                           19950801 (60)
DT
       Utility
FS
       Granted
EXNAM
       Primary Examiner: Draper, Garnette D.
LREP
       Johnston, George W., Rocha-Tramaloni, Patricia S., Silverman, Robert A.
       Number of Claims: 2
CLMN
       Exemplary Claim: 1
ECL
       No Drawings
DRWN
LN.CNT 1531
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       A recombinant human IL-12 receptor complex produced
       on the surface of a non-human mammalian cell and free from other human
       proteins, the complex comprising the betal receptor protein complexed
       with a beta2 receptor protein, which complex is capable of binding to
       human IL-12 with high affinity. A recombinant human
       IL-12 beta2 receptor protein produced on the surface
       of a non-human mammalian cell, free from other human proteins, in its
       active form. In addition, a non-human mammalian cell having expressed on
       its surface the recombinant human IL-12 beta2
       receptor protein or the recombinant human IL-12
       receptor complex, which cell proliferates in the presence of human
       IL-12. A non-human mammalian cell having the human
       IL-12 beta2 receptor protein or the complex expressed
       on its surface and which proliferates in response to human IL-
       12 is useful for determining whether a given compound inhibits
       biological activity of human IL-12 or is an
       IL-12 agonist.
L26 ANSWER 18 OF 21 USPATFULL
AN
       1998:160106 USPATFULL
TI:
       Antibodies to receptors for human interleukin-12
       Gubler, Ulrich Andreas, Glen Ridge, NJ, United States
IN
       Presky, David Howard, Glen Ridge, NJ, United States
PΑ
       Hoffmann-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
PI
       US 5852176
                               19981222
       US 1997-915495
ΑI
                               19970820 (8)
       Division of Ser. No. US 1996-685118, filed on 23 Jul 1996
RLI
       US 1995-1701P
PRAI
                           19950801 (60)
DT
       Utility
FS
       Granted
       Primary Examiner: Draper, Garnette D.
EXNAM
LREP
       Johnston, George W., Rocha-Tramaloni, Patricia S., Silverman, Robert A.
CLMN
       Number of Claims: 1
ECL
       Exemplary Claim: 1
       No Drawings
DRWN
LN.CNT 1381
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       Antibodies to human IL-12 beta 2 receptor
       protein or an IL-12 receptor complex, the complex
       comprising the betal receptor protein complexed with a beta2 receptor
       protein, which complex is capable of binding to human IL-
       12 with high affinity.
L26 ANSWER 19 OF 21 USPATFULL
AN
       1998:147252 USPATFULL
TΙ
       DNA encoding receptors for the beta-2 chain of human IL-
TN
       Gubler, Ulrich Andreas, Glen Ridge, NJ, United States
       Presky, David Howard, Glen Ridge, NJ, United States
       Hoffmann-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
PA
       US 5840530
PΙ
                               19981124
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US 1996-685118
ΑI
                                19960723 (8)
       US 1995-1701P
PRAI
                           19950801 (60)
       US 1996-18674P
                           19960530 (60)
DТ
       Utility
FS
       Granted
       Primary Examiner: Draper, Garnette D.
EXNAM
LREP
       Johnston, George W., Rocha-Tramaloni, Patricia S., Silverman, Robert A.
       Number of Claims: 12
CLMN
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
LN.CNT 1424
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       A recombinant human IL-12 beta2 receptor protein
       produced on the surface of a non-human mammalian cell, free from other
       human proteins, in its active form. In addition, a non-human mammalian
       cell having expressed on its surface the recombinant human IL-
       12 beta2 receptor protein, which cell proliferates in the
       presence of human IL-12. A non-human mammalian cell
       having the human IL-12 beta2 receptor protein on its
       surface and which proliferates in response to human IL-
       12 is useful for determining whether a given compound inhibits
       biological activity of human IL-12 or is an
       IL-12 agonist.
L26 ANSWER 20 OF 21 USPATFULL
ΑN
       1998:135151 USPATFULL
TΙ
       Human receptor for interleukin-12
IN
       Chua, Anne On, Wayne, NJ, United States
       Gubler, Ulrich Andreas, Glen Ridge, NJ, United States
PA
       Hoffmann-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
                               19981103
PΙ
       US 5831007
ΑI
       US 1995-419652
                               19950411 (8)
RLI
       Division of Ser. No. US 1994-248532, filed on 31 May 1994, now patented,
       Pat. No. US 5536657 which is a continuation-in-part of Ser. No. US
       1993-94713, filed on 19 Jul 1993, now abandoned
DT
       Utility
FS
       Granted
EXNAM
       Primary Examiner: Ulm, John
LREP
       Johnston, George W., Epstein, William H., Bucholz, Briana C.
CLMN
       Number of Claims: 10
ECL
       Exemplary Claim: 1
       35 Drawing Figure(s); 26 Drawing Page(s)
DRWN
LN.CNT 1937
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       This invention relates to substantially pure Interleukin-12 receptor
       cDNAs and protein and uses therefore. The Interleukin-12 receptor is
       shown to be a member of the cytokine receptor superfamily and has a high
       homology to human gp130.
L26 ANSWER 21 OF 21 USPATFULL
AN
       96:63048 USPATFULL
ΤI
       Recombinant DNA encoding human receptor for interleukin-12
IN
       Chua, Anne O., Wayne, NJ, United States
       Gubler, Ulrich A., Glen Ridge, NJ, United States
PA
       Hoffmann-La Roche Inc., Nutley, NJ, United States (U.S. corporation)
PΙ
       US 5536657
                               19960716
ΑI
       US 1994-248532
                               19940531 (8)
RLI
       Continuation-in-part of Ser. No. US 1993-94713, filed on 19 Jul 1993,
       now abandoned
DT
       Utility
FS
       Granted
EXNAM Primary Examiner: Ulm, John
```

4

LREP Gould, George M., Johnston, George W., Kass, Alan P.

CLMN Number of Claims: 10

ECL Exemplary Claim: 1

DRWN 34 Drawing Figure(s); 25 Drawing Page(s)

LN.CNT 1755

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to substantially pure Interleukin-12 receptor cDNAs and protein and uses therefore. The Interleukin-12 receptor is shown to be a member of the cytokine receptor superfamily and has a high homology to human gp130.

=> d clm 12 15 18

L26 ANSWER 12 OF 21 USPATFULL

CLM What is claimed is:

- 1. Pharmaceutical treatment material comprising in combination (i) IL-12, or a functional homologue thereof, for use as an adjuvant, and (ii) a protein consisting essentially of at least one antigenic portion of a papillomavirus protein, wherein (a) the papillomavirus is selected from the group consisting of HPV types 6, 11, 16 and 18, and (b) the papillomavirus protein is selected from the group consisting of E6, E7, L1 and L2 proteins.
- 2. The pharmaceutical treatment material according to claim 1, wherein the papillomavirus protein is selected from the group consisting of E7 and L2.
- 3. The pharmaceutical treatment material according to claim 1, wherein the vaccine adjuvant is IL-12 or a protein that differs from IL-12 by one or more conservative amino acid substitutions and which retains IL12 activity.
- 4. The pharmaceutical treatment material according to claim 1, wherein the vaccine adjuvant is IL-12.
- 5. Pharmaceutical treatment material comprising in combination (i) IL-12, or a functional homologue thereof, for use as an adjuvant, and (ii) a nucleic acid molecule encoding a protein consisting essentially of at least one antigenic portion of a papillomavirus protein, wherein (a) the papillomavirus is selected from the group consisting of HPV types 6, 11, 16 and 18, and (b) the papillomavirus protein is selected from the group consisting of E6, E7, L1 and L2 proteins.
- 6. The pharmaceutical treatment material according to claim 5, wherein the papillomavirus protein is selected from the group consisting of E7 and L2.
- 7. The pharmaceutical treatment material according to claim 5, wherein the vaccine adjuvant is **IL-12** or a protein that differs from **IL-12** by one or more conservative amino acid substitutions and which retains IL12 activity.
- 8. The pharmaceutical treatment material according to claim 5, wherein the vaccine adjuvant is ${\bf IL}$ -12.
- 9. The pharmaceutical treatment material of claim 1, wherein the papillomavirus is HPV type 16.
- 10. The pharmaceutical treatment material of claim 1, wherein the papillomavirus protein is selected from the group consisting of E6 and

- 11. The pharmaceutical treatment material of claim 1, wherein the papillomavirus protein is E7.
- 12. The pharmaceutical treatment material of claim 1, wherein the papillomavirus virus is HPV type 16 and the papillomavirus protein is E7.
- 13. The pharmaceutical treatment material of claim 5, wherein the papillomavirus virus is HPV type 16 and the papillomavirus protein is E7.

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CLM What is claimed is:

- 1. A method for modulating responsiveness to a corticosteroid in a subject, comprising administering to the subject suffering from a condition normally responsive to corticosteroid therapy: an interleukin-1 .beta. converting enzyme (ICE) inhibitor being administered at a dosage and by a route sufficient to inhibit production of IFN-.gamma. in the subject; and a corticosteroid, such that responsiveness of the subject to the corticosteroid is modulated as compared to when a corticosteroid alone is administered to the subject.
- 2. The method of claim 1, wherein the ICE inhibitor is an IFN-.gamma. inducing factor (IGIF) antagonist, the ICE inhibitor being administered at a dosage and by a route sufficient to inhibit IGIF activity in the subject.
- 3. The method of claim 1, wherein the corticosteroid is selected from the group consisting of cortisone, hydrocortisone, beclomethasone, flunisolide, prednisone, prednisolone, methylprednisolone, triamcinolone, deflazacort, betamethasone and dexamethasone.
- 4. The method of claim 1, wherein the subject is suffering from septic shock.
- 5. The method of claim 1, wherein the subject is suffering from Crohn's disease.
- 6. The method of claim 1, wherein the subject is suffering from asthma.
- 7. The method of claim 1, wherein the subject is suffering from graft versus host disease or transplant rejection.
- 8. The method of claim 1, wherein the subject is suffering from an autoimmune disease or disorder.
- 9. The method of claim 1, wherein the subject is suffering from an immunoinflammatory disease or disorder selected from the group consisting of asthma, adult respiratory distress syndrome, systemic lupus erythematosus, inflammatory bowel disease, Crohn's disease, ulcerative colitis, multiple sclerosis, insulin-dependent diabetes mellitus, autoimmune arthritis, rheumatoid arthritis, juvenile rheumatoid arthritis, psoriatic arthritis, inflammatory pulmonary syndrome, pemphigus vulgaris, idiopathic thrombocytopenic purpura, autoimmune meningitis, myasthenia gravis, autoimmune thyroiditis, dermatitis, atopic dermatitis, eczematous dermatitis, psoriasis, Sjogren's Syndrome, keratoconjunctivitis sicca secondary to Sjogren's Syndrome, alopecia areata, allergic responses due to arthropod bite reactions, aphthous

ulcer, iritis, conjunctivitis, keratoconjunctivitis, cutaneous lupus erythematosus, scleroderma, vaginitis, proctitis, drug eruptions, Stevens-Johnson syndrome, leprosy reversal reactions, erythema nodosum leprosum, autoimmune uveitis, allergic encephalomyelitis, aplastic anemia, pure red cell anemia, idiopathic thrombocytopenia, polychondritis, Wegener's granulomatosis, chronic active hepatitis, Graves ophthalmopathy, primary biliary cirrhosis, uveitis posterior and interstitial lung fibrosis.

- 10. The method of claim 1, wherein the subject is suffering from an acute inflammatory disorder.
- 11. The method of claim 1, wherein the subject is suffering from a chronic inflammatory disorder.
- 12. The method of claim 1, wherein the ICE inhibitor and corticosteroid are administered such that steroid resistance in the subject is reversed, as compared to when a corticosteroid alone is administered to the subject.
- 13. The method of claim 1, wherein the ICE inhibitor and corticosteroid are administered such that steroid sensitivity in the subject is increased, as compared to when a corticosteroid alone is administered to the subject.
- 14. The method of claim 1, wherein the ICE inhibitor and the corticosteroid are administered to the subject according to a schedule that reduces the dosage of the corticosteroid over time and e method ameliorates a steroid rebound effect associated with administration of reduced dosages of the corticosteroid.
- 15. A method for modulating responsiveness to corticosteroids in a subject, comprising administering to the subject suffering from a condition normally responsive to corticosteroid therapy, an interleukin-1 .beta. converting enzyme (ICE) inhibitor; and a corticosteroid, such that responsiveness of the subject to the corticosteroid is modulated as compared to when a corticosteroid alone is administered to the subject.
- 16. The method of claim 15, wherein the corticosteroid is selected from the group consisting of cortisone, hydrocortisone, beclomethasone, flunisolide, prednisone, prednisolone, methylprednisolone, triamcinolone, deflazacort, betamethasone and dexamethasone.
- 17. The method of claim 15, wherein the subject is suffering from septic shock.
- 18. The method of claim 15, wherein the subject is suffering from Crohn's disease.
- 19. The method of claim 15, wherein the subject is suffering from asthma.
- 20. The method of claim 15, wherein the subject is suffering from graft versus host disease or transplant rejection.
- 21. The method of claim 15, wherein the subject is suffering from an autoimmune disease or disorder.
- 22. The method of claim 15, wherein the subject is suffering from an immunoinflammatory disease or disorder selected from the group consisting of asthma, adult respiratory distress syndrome, systemic

lupus erythematosus, inflammatory bowel disease, Crohn's disease, ulcerative colitis, multiple sclerosis, insulin-dependent diabetes mellitus, autoimmune arthritis, rheumatoid arthritis , juvenile rheumatoid arthritis, psoriatic arthritis, inflammatory pulmonary syndrome, pemphigus vulgaris, idiopathic thrombocytopenic purpura, autoimmune meningitis, myasthenia gravis, autoimmune thyroiditis, dermatitis, atopic dermatitis, eczematous dermatitis, psoriasis, Sjogren's Syndrome, keratoconjunctivitis sicca secondary to Sjogren's Syndrome, alopecia areata, allergic responses due to arthropod bite reactions, aphthous ulcer, iritis, conjunctivitis, keratoconjunctivitis, cutaneous lupus erythematosus, scleroderma, vaginitis, proctitis, drug eruptions, Stevens-Johnson syndrome, leprosy reversal reactions, erythema nodosum leprosum, autoimmune uveitis, allergic encephalomyelitis, aplastic anemia, pure red cell anemia, idiopathic thrombocytopenia, polychondritis, Wegener's granulomatosis, chronic active hepatitis, Graves ophthalmopathy, primary biliary cirrhosis, uveitis posterior and interstitial lung fibrosis.

- 23. The method of claim 15, wherein the subject is suffering from an acute inflammatory disorder.
- 24. The method of claim 15, wherein the subject is suffering from a chronic inflammatory disorder.
- 25. The method of claim 24, wherein the ICE inhibitor and the corticosteroid are administered such that steroid resistance in the subject is reversed, as compared to when a corticosteroid alone is administered to the subject.
- 26. The method of claim 24, wherein the ICE inhibitor and the corticosteroid are administered such that steroid sensitivity in the subject is increased, as compared to when a corticosteroid alone is administered to the subject.
- 27. The method of claim 24, wherein the ICE inhibitor and the corticosteroid are administered to the subject according to a schedule that reduces the dosage of the corticosteroid over time and the method ameliorates a steroid rebound effect associated with administration of reduced dosages of the corticosteroid.
- 28. A method for modulating responsiveness to a corticosteroid in a subject, comprising: selecting a subject in need of modulation of responsiveness to a corticosteroid, wherein the subject suffers from a condition normally responsive to corticosteroid therapy; and administering to the subject an interleukin-1 .beta. converting enzyme (ICE) inhibitor which antagonizes a factor that regulates production of interferon (IFN-.gamma.) in the subject, the ICE inhibitor being administered at a dosage and by a route sufficient to inhibit production of IFN-.gamma. in the subject, such that responsiveness of the subject to a corticosteroid is modulated as compared to when a corticosteroid alone is administered to the subject.
- 29. The method of claim 28, wherein the subject is resistant to a corticosteroid prior to administration of the ICE inhibitor.
- 30. The method of claim 28, wherein the subject is responsive to a corticosteroid prior to administration of the ICE inhibitor but exhibits increased sensitivity to the corticosteroid after administration of the ICE inhibitor.
- 31. The method of claim 28, wherein treatment of the subject with a

corticosteroid is to be stopped and administration of the ICE inhibitor ameliorates a steroid rebound effect in the subject.

- 32. The method of claim 28, wherein the ICE inhibitor is an IFN-.gamma. inducing factor (IGIF) antagonist, the ICF inhibitor being administered at a dosage and by a route sufficient to inhibit IGIF activity in the subject.
- 33. A method for modulating responsiveness to corticosteroids in a subject comprising administering to the subject suffering from a condition normally responsive to corticosteroid therapy: an interleukin-1.beta. converting enzyme (ICE) inhibitor compound having the structure of Formula I: ##STR6## wherein R.sup.1 is hydrogen, C.sub.1 -C.sub.6 alkyl, or benzyl; R.sup.2 is --CHO, --COR.sup.a, or -- CN; each R.sup.a is independently hydrogen or C.sub.1 -C.sub.6 alkyl; X is a bond, CH.sub.2, CHR.sup.5, NH, NR.sup.5, or O; R.sup.3 is aryl, substituted-aryl, heteroaryl, substituted-heteroaryl, cycloalkyl, substituted-cycloalkyl, heterocycle, or substituted-heterocycle; Y is absent, NR.sup.5, CO, S, O, SO.sub.2, --O(CHR.sup.5).sub.n --, CHR.sup.5, NR.sup.5 CO, NC(O)R.sup.5, CONR.sup.5, OCHR.sup.5, CHR.sup.5 O, SCHR.sup.5, CHR.sup.5 S, SO.sub.2 NR.sup.5, C.sub.1 -C.sub.6 alkyl, NR.sup.5 SO.sub.2, CH.sub.2 CHR.sup.5, CHR.sup.5 CH.sub.2, COCH.sub.2, or CH.sub.2 CO; R.sup.4 is absent, aryl, substituted-aryl, C.sub.1 -C.sub.8 alkyl, heteroaryl, substituted-heteroaryl, cycloalkyl, C.sub.1 -C.sub.6 alkyl, substituted-cycloalkyl, heterocycloalkyl, or substituted-heterocycloalkyl; each R.sup.5 is independently hydrogen, C.sub.1 -C.sub.6 alkyl, aryl, -- (CH.sub.2).sub.n aryl, or -- (CH.sub.2).sub.n cycloalkyl; each n is independently 0 to 5, m is 1 or 2, and the pharmaceutically acceptable salts, esters, amides, and prodrugs thereof; and a corticosteroid, such that responsiveness of the subject to the corticosteroid is modulated as compared to when a corticosteroid alone is administered to the subject.
- 34. A method for modulating responsiveness to a corticosteroid in a subject, comprising: selecting a subject in need of modulation of responsiveness to a corticosteroid, wherein the subject suffers from a condition normally responsive to corticosteroid therapy; and administering to the subject an interleukin-1.beta. converting enzyme (ICE) inhibitor compound having The structure of Formula I: ##STR7## wherein R.sup.1 is hydrogen, C.sub.1 -C.sub.6 alkyl, or benzyl; R.sup.2 is --CHO, --COR.sup.a, or --CN; each R.sup.a is independently hydrogen or C.sub.1 -C.sub.6 alkyl; X is a bond, CH.sub.2, CHR.sup.5, NH, NR.sup.5, or O; R.sup.3 is aryl, substituted-aryl, heteroaryl, substituted-heteroaryl, cycloalkyl, substituted-cycloalkyl, heterocycle, or substituted-heterocycle; Y is absent, NR.sup.5, CO, S, O, SO.sub.2, --O(CHR.sup.5).sub.n --, CHR5, NR.sup.5 CO, NC(O)R.sup.5, CONR.sup.5, OCHR.sup.5, CHR.sup.5 O, SCHR.sup.5, CHR.sup.5 S, SO.sub.2 NR.sup.5, C.sub.1 -C.sub.6 alkyl, NR.sup.5 SO.sub.2, CH.sub.2 CHR.sup.5, CHR.sup.5 CH.sub.2, COCH.sub.2, or CH.sub.2 CO; R.sup.4 is absent, aryl, substituted-aryl, C.sub.1 -C.sub.8 alkyl, heteroaryl, substituted-heteroaryl, cycloalkyl, C.sub.1 -C.sub.6 alkyl, substituted-cycloalkyl, heterocycloalkyl, or substitutedheterocycloalkyl; each R.sup.5 is independently hydrogen, C.sub.1 -C.sub.6 alkyl, aryl, --(CH.sub.2).sub.n aryl, or --(CH.sub.2).sub.n cycloalkyl; each n is independently 0 to 5, m is 1 or 2, and the pharmaceutically acceptable salts, esters, amides, and prodrugs thereof, the compound being administered at a dosage and by a route sufficient to inhibit production of IFN-.gamma. in the subject, such that responsiveness of the subject to a corticosteroid is modulated as compared to when a corticosteroid alone is administered to the subject.
- 35. A method of claim 9, wherein the subject is suffering from an

immunoinflammatory disease or disorder selected from the group consisting of pemphigus vulgaris, dermatitis, atopic dermatitis, eczematous dermatitis, psoriasis, alopecia areata, allergic responses due to arthropod bite reactions, cutaneous lupus erythematosus, scleroderma, vaginitis, drug eruptions, Stevens-Johnson syndrome, leprosy reversal reactions, and erythema nodosum leprosum.

- 36. A method of claim 9, wherein the subject is suffering from an immunoinflammatory disease or disorder selected from the group consisting of multiple sclerosis, autoimmune arthritis, rheumatoid arthritis, juvenile rheumatoid arthritis, psoriatic arthritis, autoimmune meningitis, myasthenia gravis and allergic encephalomyelitis.
- 37. A method of claim 9, wherein the subject is suffering from an immunoinflammatory disease or disorder selected from the group consisting of systemic lupus erythematosus, inflammatory bowel disease, Crohn's disease, ulcerative colitis, insulin-dependent diabetes mellitus, aphthous ulcer, proctitis, Wegener's granulomatosis, chronic active hepatitis, and primary biliary cirrhosis.
- 38. A method of claim 9, wherein the subject is suffering from an immunoinflammatory disease or disorder selected from the group consisting of iritis, conjunctivitis, keratoconjunctivitis, autoimmune uveitis, Graves ophthalmopathy, and uveitis posterior.
- 39. A method of claim 9, wherein the subject is suffering from an immunoinflammatory disease or disorder selected from the group consisting of idiopathic thrombocytopenic purpura, autoimmune thyroiditis, Sjogren's Syndrome, keratoconjunctivitis sicca secondary to Sjogren's Syndrome, aplastic anemia, pure red cell anemia, idiopathic thrombocytopenia, and polychondritis.
- 40. The method of claim 9, wherein the subject is suffering from an immunoinflammatory disease or disorder selected from the group consisting of asthma, adult respiratory distress syndrome, inflammatory pulmonary syndrome, and interstitial lung fibrosis.
- 41. A method of claim 22, wherein the subject is suffering from an immunoinflammatory disease or disorder selected from the group consisting of pemphigus vulgaris, dermatitis, atopic dermatitis, eczematous dermatitis, psoriasis, alopecia areata, allergic responses due to arthropod bite reactions, cutaneous lupus erythematosus, scleroderma, vaginitis, drug eruptions, Stevens-Johnson syndrome, leprosy reversal reactions, and erythema nodosum leprosum.
- 42. A method of claim 22, wherein the subject is suffering from an immunoinflammatory disease or disorder selected from the group consisting of mutiple sclerosis, autoimmune arthritis, rheumatoid arthritis, juvenile rheumatoid arthritis, psoriatic arthritis, autoimmune meningitis, myasthenia gravis and allergic encephalomyelitis.
- 43. A method of claim 22, wherein the subject is suffering from an innumoinflammatory disease or disorder selected from the group consisting of systemic lupus erythematosus, inflammatory bowel disease, Crohn's disease, ulcerative colitis, insulin-dependent diabetes mellitus, aphthous ulcer, procitis, Wegener's granulomatosis, chronic active hepatitis, and primary biliary cirrhosis.
- 44. A method of claim 22, wherein the subject is suffering from an inflammatory disease or disorder selected from the group consisting of

ireitis, conjunctivitis, keratoconjunctivitis, autoimmune eveitis, Graves ophthalmopathy, and uveitis posterior.

- 45. A method of claim 22, wherein the subject is suffering from an immunoinflammatory disease or disorder selected from the group consisiting of idiopathic thrombocytopenic purpura, autoimmune thyroiditis, Sjogren's Syndrome, keratoconjunctivitis sicca secondary to Sjogren's Syndrome, aplastic anemia, pure red cell anemia, idiopathic thrombocytopenia, and polychondritis.
- 46. The method of claim 22, wherein the subject is suffering from an immunoinflammatory disease or disorder selected from the group consisting of asthma, adult respiratory distress syndrome, inflammatory pulmonary syndrome, and interstitial lung fibrosis.
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- CLM What is claimed is:
 - 1. An antibody directed against a interleukin-12 (IL -12) beta2 receptor protein which protein (a) has low binding affinity for human IL-12, and (b) when complexed with a human IL-12 beta1 receptor protein forms a complex having high binding affinity to human IL-12.